

Service Date: **March 31, 2005**

Docket D2005.2.14

Final Order No. 6633b

**REGARDING PROPOSED JUDITH GAP WIND POWER
PURCHASE AGREEMENT**



**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA**

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Service Date: March 31, 2005

DEPARTMENT OF PUBLIC SERVICE REGULATION
BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MONTANA

IN THE MATTER OF the Application of)	UTILITY DIVISION
NorthWestern Energy for Advanced Approval)	
Of Certain Proposed Electricity Power Supply)	DOCKET NO. D2005.2.14
Purchase Agreements)	ORDER NO. 6633b

**FINAL ORDER REGARDING PROPOSED
JUDITH GAP WIND POWER PURCHASE AGREEMENT**

APPEARANCES

FOR THE APPLICANT:

NorthWestern Energy

Ross Richardson, 116 West Granite, Butte, Montana 59701

Dennis Lopach, 208 North Montana Avenue, Suite 104, Helena, Montana 59601

FOR THE INTERVENORS:

Exergy Development Group, LLC

Marjorie L. Thomas, Dick and Thomas, P.C., 17 South Main Street, P.O. Box 645, Butte, Montana 59703

Susan Callaghan, Susan Callaghan, P.C., 17 South Main Street, Butte, Montana 59701

Montana Consumer Counsel

Robert A. Nelson, Montana Consumer Counsel, 616 Helena Avenue, Room 300, P.O. Box 201703, Helena, Montana 59620-1703

Renewable Northwest Project, Natural Resources Defense Council, Human Resource Council – District XI and Montana Environmental Information Center

Charles E. Magraw, 501 8th Avenue, Helena, Montana 59601

PPL Montana, LLC

Michael J. Rieley, 24 West Sixth Avenue, Suite 4A, P.O. Box 1211, Helena, Montana 59624

Carl Gilmore II, Preston Gates Ellis, LLP, 925 4th Avenue, Suite 2900, Seattle, Washington 98104-1158

Before:

Greg Jergeson, Chairman
Brad Molnar, Vice Chairman
Doug Mood, Commissioner
Robert H. Raney, Commissioner
Thomas J. Schneider, Commissioner

Commission Staff:

Eric Eck, Utility Division
Will Rosquist, Utility Division
Kate Whitney, Utility Division
Leroy Beeby, Utility Division
Al Brogan, Staff Attorney

INTRODUCTION

1. In this order the Montana Public Service Commission (PSC or Commission) considers and issues its decision on an application from NorthWestern Energy (NWE) for approval of an electric power supply agreement between it and Judith Gap Energy, LLC (Judith Gap).

2. On February 7, 2005, NWE filed an application with the Commission asking that the PSC make the following findings on a power purchase agreement between NWE and Judith Gap Energy and on a power purchase agreement between NWE and NorthWestern Corporation's Colstrip Unit 4: (1) the agreement is in the public interest; (2) the agreement resulted from a reasonable effort by the default supplier to comply with the objectives in § 69-8-419, MCA, and the Default Supply Resource Planning and Procurement Rules, ARM 38.5.8201-29; and (3) the price, quantity, duration and related terms of the agreement are reasonable.

3. Due to the expiration of the federal production tax credit at the end of 2005, NWE requested the Commission consider the wind power purchase agreement between NWE and Judith Gap on an expedited basis. NWE stated in the application that approval by the Commission is required no later than March 31, 2005. The NWE application was noticed on February 9, 2005. The Commission decided to bifurcate the docket and consider the power purchase agreement between NWE and Judith Gap Energy (wind contract) first, followed after March 31 by the Colstrip 4 contract. Procedural Order No. 6633 was issued on February 25, 2005 establishing an extremely expedited schedule for consideration of the wind contract and setting a public hearing for March 17, 2005. The Commission granted intervention to Montana

Consumer Counsel (MCC), Exergy Development Group (Exergy), PPL Montana (PPL), and Renewable Northwest Project (RNP), Natural Resources Defense Council, Human Resource Council – District XI, and Montana Environmental Information Center (Environmental & Low Income Group). The Commission limited the scope of this phase of the proceeding to issues directly related to the wind contract and prohibited access to proprietary information by Exergy and PPL. The hearing was held March 17 and 18, 2005. A satellite public hearing was held in Billings March 28, 2005.

Briefs

4. NWE, MCC, Environmental & Low Income Group, Exergy and PPL submitted post-hearing briefs in this Docket.

LEGAL BACKGROUND

5. NWE is a default supplier of electricity under Montana law. §§ 69-8-208(3) and 210(1), MCA. As part of providing default supply service NWE may apply to the Commission for “advanced approval of a power supply purchase agreement.” § 69-8-421(1), MCA.

6. Section 69-8-421, MCA, reads in pertinent part as follows:

(1) A default supplier may apply to the commission for advanced approval of a power supply purchase agreement that is:

(a) not executed; or

(b) executed with a provision that allows termination of the agreement if the commission does not find the agreement reasonable.

(3) (a) The commission may approve or deny, in whole or in part, an application for advanced approval of a power supply purchase agreement.

(b) The commission may consider all relevant information known up to the time that the administrative record in the proceeding is closed in the evaluation of an application for advanced approval of a power supply purchase agreement.

(c) A commission order granting advanced approval of a power supply purchase agreement must include the following findings:

(i) advanced approval of all or part of the agreement is in the public interest;

(ii) the agreement resulted from a reasonable effort by the default supplier to comply with the objectives in 69-8-419 and the rules adopted pursuant to 69-8-419; and

(iii) the price, quantity, duration, and other contract terms directly related to the price, quantity, and duration of the power supply purchase agreement are reasonable.

(d) The commission order may include other findings that the commission determines are necessary.

(4) Notwithstanding any provision of this chapter to the contrary, if the commission has issued an order containing the findings required under subsection (3)(c), the commission may not subsequently disallow the recovery of costs incurred under the agreement based on contrary findings.

(6) Nothing limits the commission's ability to subsequently, in any future cost recovery proceeding inquire into the manner in which the default supplier has managed a power supply purchase agreement as part of its overall portfolio. The commission may subsequently disallow default supply costs that result from the failure of a default supplier to reasonably administer power supply purchase agreements in the context of its overall default supply portfolio management and service obligations.

7. Section 69-8-419, MCA, reads in pertinent part:

(1) The default supplier shall:

- (a) plan for future default supply resource needs;
- (b) manage a portfolio of default supply resources; and
- (c) procure new default supply resources when needed;

(2) The default supplier shall pursue the following objectives in fulfilling its duties pursuant to subsection (1):

- (a) provide adequate and reliable default supply services at the lowest long-term total cost;
- (b) conduct an efficient default supply resource planning and procurement process that evaluates the full range of cost-effective electricity supply and demand-side management options;
- (c) identify and cost-effectively manage and mitigate risks related to its obligation to provide default electricity supply service;
- (d) use open, fair, and competitive procurement processes whenever possible; and
- (e) provide default supply services at just and reasonable rates.

8. The Commission's administrative rules adopted pursuant to § 69-8-419 are at ARM 38.5.8201-28.

9. In considering the NWE application the Commission, guided by § 69-8-421(3)(c), MCA, must determine 1) whether advanced approval of the Judith Gap agreement is in the public interest; 2) whether the agreement resulted from a reasonable

effort to comply with the objectives of § 69-8-419 and related administrative rules; and 3) whether the price, quantity, duration and related terms of the agreement are reasonable.

PRELIMINARY LEGAL MATTERS

Data requests

10. On March 14, 2005, Exergy filed an Objection to Staff Action Resolving Discovery Disputes. Exergy asserts that Commission Staff narrowed the scope of the inquiry too much.

11. The Commission, at a regularly scheduled work session on March 4, 2005, granted Exergy's petition to intervene subject to conditions that precluded Exergy or its counsel or outside experts from having access to confidential information and that restricted the proceeding to items directly connected with the Wind Contract.

12. Exergy asserts that the information sought in XRG-1, XRG-2 and XRG-3 is "relevant to NWE's assertion that capacity from dispatchable resources is available to integrate wind power and thus directly related to the wind contract." First, Exergy mischaracterizes the information requested. Exergy asked for information regarding criteria for providing firm resources to cover peak loads (XRG-1), reserve margin used in peak load planning (XRG-2) and hourly peak loads and sources of supply for serving those loads (XRG-3). This information is not directly related to the Wind Contract. This is information that relates to the operational policies and conditions of the default supply. Second, Exergy mischaracterizes NWE's position on resources necessary to integrate wind power. In a File Memorandum dated March 5, 2005 by Mark Thompson, and provided to all parties in response to PSC-007, NWE described possible methods of integrating wind power. Only some of the methods relied on dispatchable resources being available to NWE.

13. Exergy asserts that the information sought in XRG-17, XRG-18 is about how ancillary services are provided currently provided to default supply, is relevant for comparison purposes and should be available from NWE Default Supply even though NWE is functionally separate from NWE Transmission. The Commission does not need to consider the questionable relevancy of the requested information. NWE is required by FERC to maintain NWE Transmission as functionally separate, see Order 888, 61 FR

21,540 (May 10, 1996), and to adhere to standards of conduct, see Order 889, 61 FR 21,737 (May 10, 1996) and Order 2004, 68 FR 69,134 (Dec. 11, 2003). The standards of conduct limit the information that NWE Transmission can share with NWE Default Supply unless the information is released to the public. Although functional separation creates a separation that is not supported by a legal entity analysis, the Commission concludes that functional separation provides a basis for limiting access to information.

14. Exergy asserts that the information sought in XRG-21 is about how NWE plans to provide ancillary services in the future and is relevant to the costs of wind integration. XRG-21 asked for “studies or documents . . . that discuss alternatives NWE may be considering for future provision of Imbalance, Regulation, Load Following and Contingency Reserves for the default supply.” XRG-21 is not restricted to information regarding the provision of ancillary services related to the Wind Contract. Rather, XRG-21 seeks information about NWE’s planning and operational strategy in serving the default supply. This information is not directly related to the Wind Contract.

15. Exergy asserts that the information sought in XRG-42 “addresses energy imbalance costs for generators and how they might be determined in the future.” XRG-42 requested “a complete copy of the Generation Imbalance tariff filing by NWE’s transmission function with FERC, which has been withdrawn” and requested a detailed description of “the reasons for withdrawing the filing.” The tariff is a public document and is available on FERC’s website under Docket ER04-1106-000 and the reasons for withdrawal are explained in the Unopposed Motion of NorthWestern Corp. to Partially Withdraw Tariff Filing filed in FERC Docket ER04-1106-002. If Exergy needs to examine the documents to determine that they are relevant to the Wind Contract, they are available without placing a burden on NWE. There is no showing that the documents are directly related to the Wind Contract.

16. Exergy asserts that the information requested by XRG-44 “deals with how NWE currently provides ancillary services for the control area which is relevant. XRG-44 asked for “monthly Control Performance Standard Surveys” and for “NWE’s current L₁₀ value.” These are data that reflect various measures of Area Control Error (ACE). ACE is “the instantaneous difference between actual and scheduled interchange, taking into account the effects of frequency bias (and time error or unilateral inadvertent

interchange if automatic correction for either is part of the system's AGC)." WECC MORC Definitions at p. 1. This data is neither related to how NWE currently provides ancillary services nor directly related to the Wind Contract.

Confidential information

17. Exergy asserts that for information deemed confidential there was no prima facie showing that provided a clear legal basis for confidentiality. Exergy's assertion is incorrect. On February 9, 2005, NWE filed a Motion for Protective Order seeking protection of specific information regarding parties from whom NWE received bids or responses to the RFP, including the identity of the bidder, the quantity, term, location of delivery of the power, prices and pricing structure of all bids or responses; specific information regarding NWE's evaluation of bids; and NWE's detailed load statistics. On February 17, 2005, the Commission issued Protective Order No. 6633. The Commission, in considering NWE's Motion for a Protective Order, made an independent determination that NWE had made a prima facie showing that information described is confidential information as defined in ARM 38.2.5001(1).

18. Exergy asserts that the Commission erred in denying its counsel and outside expert access to confidential information in accordance with ARM 38.2.5023. PPL asserted a similar continuing objection. The Commission recognizes that under normal circumstances an intervenor's counsel is granted access to confidential information and counsel is permitted to provide an unaffiliated expert access to confidential information. However, the Commission may waive the application of any of its procedure rules when justice requires. ARM 38.2.305. The Commission carefully considered the interests of the private intervenors¹ that it could protect and the interests of NWE and other bidders in maintaining the confidentiality of asserted trade secrets. The Commission reached a careful, reasoned balance of the competing interests.

19. The Commission determined that the private intervenors have a protectable interest in an open, fair and competitive process, see § 69-8-419(2)(d), MCA, and an interest in presenting their views and arguing their positions to the Commission. The Commission determined that if the process is fair, open and competitive, the private intervenors do not have a protectable interest in having their bid selected and that the

¹ "Private intervenors" means intervenors other than the Montana Consumer Counsel.

property interests of NWE and the other bidders outweigh the private intervenors' interest in access to confidential information.

20. The Commission allowed the private intervenors to engage in discovery regarding all non-confidential information directly related to the Wind Contract. The Commission allowed the private intervenors to present their respective cases and to cross-examine witnesses. The only restriction placed on private intervenors was to prohibit access to the confidential information of others. In its decision limiting the private intervenors' access to confidential information, the Commission specifically waived ARM 38.2.5023.

21. The Commission and the MCC had access to the confidential information and used it in the performance of their functions.

22. The Commission overrules Exergy's Objection to Staff Action Resolving Discovery Disputes.

Dismissal of intervenors

23. At the close of the technical hearing, NWE renewed its motion that Exergy and PPL be dismissed from the proceeding. The Commission carefully considered the appropriateness of allowing Exergy and PPL to intervene subject to certain conditions. At the time of the renewed motion, no party had offered any additional evidence or reasoning that would support dismissal of these intervenors. As discussed above, the private intervenors have certain limited protectable interests. Intervention subject to the restrictions is appropriate. The Commission denies NWE's renewed motion to dismiss Exergy and PPL from the proceeding.

NORTHWESTERN ENERGY'S APPLICATION

24. A copy of the agreement between NWE and Judith Gap Energy is included with the application. A summary of the agreement and a project description are provided by NWE at pages 3-6 of the application. Under the agreement, NWE would purchase from Judith Gap the energy from a 135-150 MW wind farm at an average price of \$31.60/MWh² of delivered energy (with the federal production tax credit and pending state property tax reduction for wind

² NWE's response to an MCC data request (MCC-13) indicated the correct annual average price of the wind contract is actually \$31.71/Mwh.

facilities). The contract term is 20 years. The estimated capacity factor is 37% or greater and the annual estimated energy to be produced is 437,562 MWh, which is about 7% of the annual default supply resource requirement. Judith Gap Energy will provide a performance guarantee of \$8 million for liquidated damages.

25. The wind farm will connect directly to NWE's system via a new substation on a NWE 230KV line that runs through the project. Judith Gap will arrange and pay for the interconnection to the NWE transmission system in accordance with an agreement between the parties.

Prefiled testimony of Patrick R. Corcoran

26. Mr. Corcoran, NWE's policy witness, recounted NWE's (and its predecessor Montana Power Co.'s) activities as the default electricity supplier over the past few years leading up to this application. As part of this background information, he noted that NWE conducted a wind RFP in 2002, which resulted in the selection of the bid by Wind Park Solutions, now known as Judith Gap Energy LLC. He said Wind Park was ultimately asked to re-bid into the 2004 Request For Proposals (RFP).

27. According to Mr. Corcoran, NWE's 2004 RFP and this application for advance approval are steps to implement the default supply plan that was the subject of PSC review last year. He said NWE proceeded on the assumption that NWE's plan is generally acceptable in the areas the Commission did not address in its comments on the plan in August 2004. Mr. Corcoran said NWE has addressed in this advance approval application the following concerns identified by the Commission in its plan comments last year:

- Too-complex modeling: According to Mr. Corcoran, the complex portfolio modeling and analysis for a 20-year period using NWE's PCI/Gentrader® software was complemented in this filing by a simpler modeling version that was used by Lands Energy Consulting when it conducted its RFP review.

- Lack of long-term focus: Mr. Corcoran said both NWE and Lands Energy incorporated a long-term focus into their RFP modeling, including a 20-year net present value analysis of each bid and a 20-year analysis of the portfolios developed from the shortlisted RFP bids.

- Post-2007 replacement of PPL baseload contracts: Mr. Corcoran pointed out that the 2004 RFP requested post-2007 resource bids.

- Best mix of resources: Mr. Corcoran said NWE used the RFP results to repeat the modeling that had been conducted for the 2004 default supply plan using actual bid information and that the resulting analyses and updated default supply plan support the inclusion of the proposed resources, including wind, in the portfolio.

28. Mr. Corcoran stated that NWE's resource decisions reflected in this filing are based on the updated default supply plan that resulted from the RFP modeling using actual resource costs from the bids.

29. According to Mr. Corcoran, NWE conducted its 2004 RFP process in compliance with PSC rules. He described the role of Lands Energy Consulting, an independent firm hired by NWE, in administering the RFP process, analyzing the 53 conforming bid proposals, and developing and forwarding to NWE a "blind" preliminary shortlist. Mr. Corcoran said NWE then conducted its own analyses of the short-listed bids to select the ones to include on a final list; at that point, Lands Energy supplied NWE the identities of the bidders chosen for final analysis. Mr. Corcoran noted that the testimonies of Steven E. Lewis of Lands Energy and of Mark D. Thompson of NWE provide details of the RFP activities. He said NWE and Lands Energy thoroughly documented their RFP activities and parties that review the documentation will understand the process and the reasons for the decisions that NWE made.

30. Mr. Corcoran commented that NWE consulted throughout the process with its Technical Advisory Committee, the members of which serve in an advisory-only role.

31. Mr. Corcoran described NWE's Energy Supply Board as the entity that made major decisions in the RFP process. The Energy Supply Board is comprised of NWE's chief executive officer, chief operating officer, chief financial officer, corporate legal counsel, and Mr. Corcoran.

32. A summary of the resource selections made by NWE as a result of the RFP was provided by Mr. Corcoran. He said NWE has executed contracts for four short-term (less than 18 months) resources, and explained NWE would not seek pre-approval of these contracts, but will include them for review in annual electric tracker filings. The long-term resources selected include the Judith Gap Energy wind proposal for 135-150 MW and the Colstrip 4 unit-contingent baseload proposal for 90 MW that are the subjects of this advanced approval docket, as well as the dispatchable Montana First Megawatts proposal and the PPL unit-contingent, off-peak, 50 MW baseload proposal, both of which are the subjects of ongoing discussions.

33. Mr. Corcoran claimed the Judith Gap Energy and Colstrip 4 proposals are consistent with the resource needs identified in NWE's default supply plan. Exhibit PRC-1 is a table that Mr. Corcoran said illustrates how the resource selections tie to the plan.

34. Regarding the Judith Gap wind proposal, Mr. Corcoran commented its average price of \$31.71/MWh of delivered energy (with tax credits and proposed state property tax reductions) beat out the other wind bids priced at \$38.50/MWh and higher. Mr. Corcoran said the Judith Gap price would result in about \$34.1 million (net present value) of savings over the next highest bid over the life of the contract. He cautioned, however, that the full price of adding wind to the portfolio will include the costs NWE will need to incur to "firm" the resource. Mr. Corcoran said NWE expects the total cost to be consistent with alternative baseload resources. He added that including a wind resource adds product diversity to the portfolio's resource mix.

35. According to Mr. Corcoran, the PSC must issue its order on the wind contract by March 31, 2005, in order for the project, if approved, to proceed and remain binding.

36. Mr. Corcoran's testimony also included discussions of issues that are not subjects of the March 17 hearing, such as RFP bids not selected, bids that involved NWE affiliates, default supply policy issues, and NWE's decision not to replace the PPL baseload contracts at this time. These issues, along with the request for advance approval of the Colstrip 4 contract, will be taken up in the second phase of this Docket.

Prefiled testimony of Steven E. Lewis (Lands Energy Consulting)

37. Mr. Lewis is a principal and employee of Lands Energy Consulting. Lands Energy has provided consulting services related to the July 2, 2004 RFP issued by NWE. Previously Lands Energy participated with EES Consulting on a dispatchable resource RFP in 2002 and administered a wind resource RFP in 2003.

38. NWE contacted Lands Energy in March 2004 seeking its involvement in one or more resource solicitations during 2004. Initial discussions contemplated two RFPs. The first would be a pre-2007 RFP that would combine baseload and dispatchable products to be conducted between March and July 2004. The second would be post-2007 individual baseload, wind and DSM RFPs in the third quarter of 2004.

39. In order to evaluate industry accepted procurement practices for resource procurement, Lands Energy benchmarked or compared the activities of other utilities, and provided NWE with a memorandum which contained detailed information on the processes and schedules these other

utilities used in their resource solicitations. The memorandum is attached to the testimony of Mr. Lewis. (Exhibit____(SEL-3)

40. After that memo was completed NWE informed Lands Energy that it had decided to issue an all source RFP. Portfolio modeling done for the Default Supply Resource Procurement Plan had concluded the default supply portfolio would achieve the best combination of price mitigation and risk reduction through the addition of baseload resources, combined with wind and dispatchable resources. An all source RFP would produce current information regarding the resource options available to NWE, allowing selection of the best portfolio additions available. NWE's staff, with input from its Technical Advisory Committee determined that it would be preferable to conduct an all source RFP and solicit bids for all available resource options available in the market at one time.

41. Lands Energy developed and managed the all source RFP for NWE. The firm provided a draft of the RFP, provided process and document management services (which included the management of all interaction with the bidders). Lands Energy performed the initial review and analysis of the proposals, from receipt of the proposals through the preliminary shortlisting of proposals. Lands Energy acted as an independent third party to review the proposed terms and conditions of every contract that was negotiated with an affiliate pursuant to the RFP.

42. NWE wanted to conduct the RFP evaluation process without NWE staff having knowledge of the identity of bidders associated with specific bids. The identities of bidders submitting proposals were "masked" or "blinded," with the intent that NWE's bid review and selection would be conducted in a fair, unbiased way.

43. Mr. Lewis explained the timeline followed by Lands Energy in its management of the RFP. The all source RFP was issued on July 2, 2004. Responses were received on August 12-13, 2004. The proposals consisted of 9 intermediate term products and 35 long-term proposals. Intermediate term products were defined in the RFP as energy and exchange products that would commence delivery on or after October 2004, and would terminate before June 30, 2007.

44. On August 14, 2004 Lands Energy provided summary detail on the nine intermediate term offers to NWE for review. On August 14 and 15, NWE conducted its review and analysis of these offers, completed its selection and executed contracts during the following work week.

45. On August 19 to September 5, 2004 long-term proposals were summarized in a “blinded” fashion and sent to NWE. On September 15, Lands Energy recommended that ten long-term proposals be eliminated from further analysis. Bids were eliminated because they were either not competitive or were non-conforming. The memo from Lands Energy explaining the reasons for elimination is attached to the testimony of Mr. Lewis. (Exhibit____(SEL-4)

46. On September 5-15, 2004 Lands Energy categorized the remaining Long-Term proposals into five resource types: wind, baseload and shaped, dispatchable, displaceable coal, and other. They analyzed the proposals within each resource type for overall cost and value to the utility using two simplified spreadsheet-based intrinsic model runs. These runs are attached to the testimony of Mr. Lewis. (Exhibit____(SEL-5)

47. During September 2004 NWE retained Global Energy Concepts to review the quality of the wind data provided by bidders, and to assess the validity of energy projections arising from the proposals.

48. Between September 29th and October 1st the remaining proposals were then sorted into three classifications based on their relative competitiveness (Tiers 1, 2 and 3). Tier 1 proposals were proposed for detailed analysis; Tier 2 proposals were suspended, but held in reserve; and Tier 3 proposals were rejected as non-competitive. Tier 1 bidders were asked to review four to five page bid summaries of their proposals, and then to affirm by October 6th whether or not the summary details accurately reflected their proposals.

49. On October 31st Lands Energy selected 14 of the 31 Tier 1 proposals for the preliminary shortlist, based on an evaluation of both quantitative and qualitative factors. The preliminary shortlist included the two top-rated proposals of each resource category, any proposals for other product types that scored as well as the best of the ten top-rated proposals, and any additional proposals that appeared to present a significant value. Additional proposals were included in the preliminary shortlist for the following reasons: the amount of capacity and energy proposed by the individual top-rated proposals was insufficient to meet the volumes specified by NWE, or a proposal scored well enough to warrant further consideration even though it may not have been among the top-rated in its category.

50. NWE assembled and compared portfolios of its existing resources with various combinations of the proposals on Land’s Energy’s preliminary shortlist to determine those with

the best overall fit to the existing portfolio. At this time, the identity of the bidders remained “blinded” to NWE.

51. On November 19th NWE advised Lands Energy of its own shortlist of proposals for further portfolio analysis. Lands then provided NWE the identities of the bidders it had chosen. NWE, after its own extensive analyses, made its final selections and began contract negotiations.

52. The goal of the all source RFP was to solicit energy resources in three major categories that would complement NWE’s existing resource portfolio and reduce market risk at the lowest possible price. The Default Supply Resource Procurement Plan specified amounts of additional dispatchable, baseload and wind resources that were likely to be preferred from the perspectives of cost and risk mitigation. The amounts identified in the plan were up to 450 MW of baseload resources, 178-308 MW of dispatchable resources, and 150 MW of installed wind capacity. The ultimate selection would depend on the competitiveness and impact to the overall portfolio compared to other resources. Despite the identification of specific resources and quantities, the RFP was clear that all resources would be considered.

53. A portfolio’s strengths may arise from a combination of resources, rather than being attributable to any single resource within the portfolio. The all source RFP provided assurance that NWE had the best offers available in the market from which to construct competitive resource portfolios.

54. Forty-four proposals were submitted by bidders. This was a very substantial response. As Lands Energy began reading the various proposals, it became evident that several bidders had included more than one product proposal in their bid packets. When the product proposals were sufficiently different to warrant separate analysis, Lands Energy issued “sub bid” numbers to those proposals. Because some bidders submitted more than one proposal, the 35 distinct long-term offers were broken down into 60 proposals for modeling purposes. The increase in the number of proposals for modeling purposes was in part due to the fact that some bidders offered different prices, different terms or special pricing in the event of certain conditions, which required separate analysis. Based only on the quantity of proposals received, Lands Energy believes that this RFP provided a competitive sampling of the market.

55. Lands Energy evaluated the responses received in the all source RFP. The RFP rating and review was separated into two phases. In the first phase, Lands Energy performed intrinsic quantitative analysis of each proposal and compared the results with the other proposals within

the same resource category (baseload, dispatchable, wind, etc.). Lands Energy also performed a qualitative (non-price) analysis of each proposal based on the criteria cited in the RFP. The process for determining the qualitative assessment was discussed extensively with NWE and the modeling subcommittee of the Technical Advisory Committee in order to ensure a fair assessment of the non-price factors. In the second phase, NWE performed comprehensive computer modeling of the best resource alternatives identified by Lands Energy. NWE's modeling was designed to identify the proposals that would provide the greatest benefit to the portfolio.

56. The quantitative price review captured the price-related elements of each proposal, such as the cost relative to proposed capacity and energy, the costs and benefits dispatchability, the firmness of the product, the ability to remarket the energy, and the value associated with the point or points of delivery. In the preliminary shortlisting process, the intrinsic spreadsheet model that was used did not compute the value of ancillary services or lack thereof, nor the costs and risks associated with integrating the resource into the Utility's portfolio. It was understood that the stochastic modeling performed by NWE, using the PCI model as part of the final selection process, would capture these values and the relative impact they would have on different resource portfolios.

57. In order to develop the preliminary shortlist, resource proposals were compared against one another only within each of the resource categories (baseload/standard shaped, displaceable coal, dispatchable, wind and other). This told Lands Energy whether a proposal that did not score at the top of its resource category warranted continued review. A resource with specific qualitative strengths, but not at the top of its category in a pure price/value analysis, might be included in the preliminary shortlist for additional consideration in order to ensure that NWE had a good sample of resource alternatives. Lands Energy submitted price scores and qualitative summaries to NWE and the Technical Advisory Committee for review and comment prior to the completion of the preliminary shortlist selections.

58. In considering the qualitative areas of each proposal, the following key areas were considered: 1) development risk; 2) experience of the project team; 3) site control; 4) environmental review status; 5) permit status; 6) counterparty risk; 7) complexity of the unit and technology risk and 8) NWE supplier diversity and counterparty concerns.

59. Lands Energy recommended bid numbers 15, 7.2, 18, 23.1.1 through 23.1.5, 11A – 11B, 30, 9.1, 23.2 through 23.4, 3, 23.7, 23.8, 45.1 and 45.2 for the preliminary shortlist.

60. On November 17, 2004 NWE issued a memo indicating that it had selected bid numbers 18, 15, 23.1.3, 23.1.2, 9.1, 11A, 11B and 23.8 from the Lands Energy preliminary shortlist. NWE requested that Lands Energy forward the bid identification, bid binders and all related material for those bids.

61. Affiliate bids were handled in the same manner as bids from non-affiliated bidders. They were received on the same date and the identity of the bidder was not revealed to NWE until the utility informed Lands Energy of its selection for contract negotiations. During the evaluation process, affiliate bid summaries were identified by bid numbers assigned by Lands Energy when bid detail was provided to NWE for its analysis. All bids went through the same steps for price and non-price scoring. Affiliate bids were afforded the same opportunity to refresh price as other bids. NWE did not alter its selections based on the identities of any of the bidders.

62. Lands Energy performed two separate quantitative reviews that were used to screen the proposals. The first was a comparison of the proposal to the medium price forecast for electricity prices. A memorandum summarizing this process is attached to the testimony of Mr. Lewis. (Exhibit____(SEL-8))

63. The second quantitative review was based on the expected cost to serve the default load with a portfolio comprised of NWE's existing long-term resources and each of the proposed new resources. The details of this second portfolio analysis were summarized in the preliminary shortlist recommendation provided to NWE and is attached to the testimony of Mr. Lewis. (Exhibits____(SEL-9) and ____ (SEL-9a))

64. The price and value component of the quantitative review was weighted at a potential maximum score of 70 out of 100 points. The qualitative or non-price selection criteria comprised the remaining 30 points.

65. Since the preliminary shortlist provided to NWE was a reflection of the best proposals in each category, Lands Energy's modeling was not designed to compare proposals to others in different categories. The stochastic modeling performed by NWE is the preferred method for comparing proposals of different resource types.

66. Mr. Lewis provided two examples of portfolios used by vertically integrated utilities to serve their load requirements. Puget Sound Energy maintains a resource portfolio comprised of approximately 20 percent coal, 29 percent natural gas generation, and 45 percent hydro. Seattle City Light has a portfolio made up of 0 percent coal, 5 percent natural gas generation, 89 percent hydro, 2 percent wind resources and the rest from miscellaneous resources.

67. A load serving utility uses its load factor as a measure of the variability of load it must plan to meet. A lower load factor is an indication that the utility may require a larger percentage of shaped or dispatchable resources to effectively meet the load variations.

68. Mr. Lewis stated that the NWE RFP conformed to standard industry practices. The RFP was administered by an outside consultant; it was representative of the market with a broad quantity of bidders and resource types; it followed PSC procurement rules, including the treatment of affiliate bids and was a commercially reasonable process to attain the best bids possible in the market at this time.

69. All bidders followed the same process, had equal access to information and were evaluated with the same scoring criteria. This process treated all bidders fairly and without bias.

70. NWE is in somewhat of a unique position, in that nearly all its portfolio requirements will need to be procured by mid 2007. Most other utilities already have a portfolio of long-term resources under their control and are augmenting this existing portfolio with specific additions. Mr. Lewis believes NWE's selections reflect the need to arrange for a variety of resource types as it continues to re-build its resource portfolio.

71. NWE did not accept all the offers proposed by bidders in its final selection. The RFP did not obligate NWE to sign supply contracts as a result of the process, and it should be expected that the buyer may define acceptable terms and conditions as part of the contract negotiation phase.

Prefiled testimony of Mark D. Thompson

72. Mr. Thompson highlighted a substantial difference between NWE and other regional utilities. NWE's Montana resource portfolio consists entirely of wholesale power purchase agreements; the portfolio lacks physical generation resources and, therefore, is fully exposed to changing conditions in regional energy markets. Mr. Thompson stressed the importance of

procuring resources by evaluating how individual resource options contribute to the portfolio as a whole, especially with regard to overall cost and risk exposure.

73. Mr. Thompson described the economic trade-offs involved in balancing a portfolio's exposure to costs and risks. He used the analogy of a person choosing from among alternative options for health care insurance by weighing the monthly premium costs against the annual deductible; choosing the right alternative depends on an assessment of the person's health care requirements and tolerance for uncertainty. He identified two primary risks inherent in the current default supply portfolio: 1) the pending expiration of substantial baseload and heavy load supply resources in June 2007, and 2) the absence of resources able to respond to variable on-peak and super-peak supply requirements. These primary risks are directly related to wholesale market conditions, a fact that is especially noteworthy given that about 85% of total default supply load requirements must be acquired for the period beginning July 1, 2007.

74. In order to address the first primary risk (the baseload requirement post 2007), NWE attempted to procure a replacement for the existing contracts with PPL, which provide about 3.3 million MWh per year (58% of total requirements) at a cost of \$31.95 per MWh. According to Mr. Thompson, NWE determined that many of the prices offered in response to NWE's RFP were too costly. As a result, NWE chose to procure only one new baseload resource at this time, Colstrip 4.

75. In order to address the second primary risk (the lack of long-term on-peak and super-peak energy supply), NWE determined that a combination of wind and dispatchable resources should be procured. Mr. Thompson noted that other utilities in the Pacific Northwest have implemented similar strategies and NWE's own modeling of portfolio costs and risks also supports this strategy.

76. In addition to the two primary risks just described, Mr. Thompson also identified a number of secondary risks inherent in default supply portfolio management. The secondary risks include: 1) short-term weather impacts and associated load fluctuations, 2) customer migration to/from choice, 3) imbalances between loads and resources, 4) unit contingency of resources, 5) transmission constraints, and 6) counterparty performance. (See Thompson pp. 14-15) With respect to transmission constraints, Mr. Thompson maintained that there are no operational constraints that limit NWE's ability to import energy into Montana. Economic constraints, on the other hand, can limit the amount of baseload resources the portfolio can incorporate cost-

effectively; the cost to transfer energy from Montana to the Mid-Columbia area is an important consideration to the extent baseload energy supplies exceed load for significant periods of time.

Market outlook

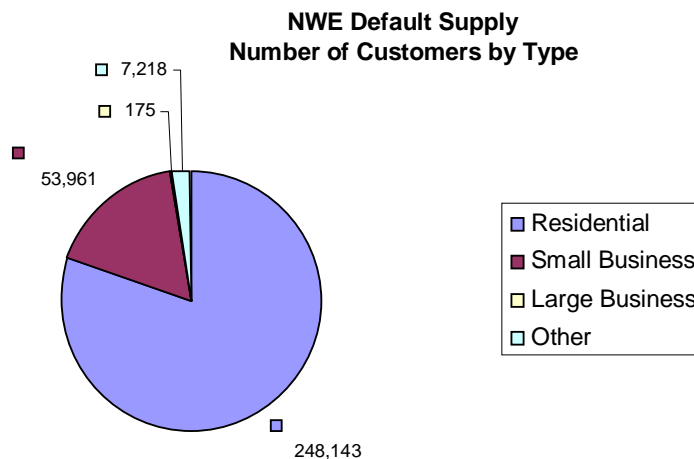
77. Mr. Thompson testified that NWE currently procures about 25% of its annual energy requirements in the short-term wholesale market. These short-term transactions involve contracts of 18 months or less. According to Mr. Thompson, NWE has been successful at outperforming the market since 2002. He noted that exposure to short-term wholesale market prices increased from what it was in 2002 due to the expiration of a 100 MW baseload contract and the return of 600,000 MWh of choice loads while at the same time wholesale market prices increased about 27%. But default supply rate impacts over this period were about 1.4%. While acknowledging its ability to manage and mitigate wholesale price fluctuations to some extent through forward contracts and transmission opportunities, Mr. Thompson stressed that NWE cannot mitigate market trends completely. He also indicated that the proportion of total MWhs purchased in short-term markets substantially understates the risk associated with the current portfolio; although 28% of total energy is purchased in short-term markets, during super-peak periods this exposure increases to 42%. Short-term market purchases occur primarily during peak and super-peak periods when wholesale prices are the highest.

78. Mr. Thompson stated that today's wholesale electricity prices in the Northwest are high, reflecting the effects of three consecutive below-normal hydro years, high natural gas prices and the dominance of independent power generators (IPPs) that own baseload generation. Mr. Thompson said world crude oil prices and the weak U.S. dollar are also influencing wholesale electricity prices through their impact on domestic natural gas prices. According to Mr. Thompson, it is possible the factors behind today's higher wholesale electricity and natural gas prices will persist, but he also believes it is possible there will be a "pull back" from current levels. NWE must consider both current and potential future market conditions as it makes resource decisions. Mr. Thompson suggested that the Judith Gap project, as part of the set of resources NWE is presenting in this filing, will provide value to the default supply portfolio under low, medium and high market conditions.

Resource needs assessment

79. NWE serves a total of 303,000 default supply customers, virtually all of which are residential and small business customers. A specific breakdown of customers by category is shown in Chart 1. Residents and small businesses represent 80% and 18%, respectively.

Chart 1.



80. Mr. Thompson testified that the total energy required to serve the default supply load is about 5.8 million megawatt-hours (MWH) per year. The average annual on-peak load is about 780 MW with a seasonal peak of 1,100 MW. The average off-peak load is 450 MW. Default loads fluctuate significantly from month-to-month, day-to-day and hour-to-hour, driven primarily by generally predictable customer usage patterns and unpredictable weather conditions. Over the course of a single day loads vary by hundreds of MW according to customers' consumption habits. For example, the difference between the minimum (off-peak) and maximum (super-peak) load on a single day in July can be as much as 600 MW. In November the difference can be as much as 400 MW. Weather changes from day-to-day and from season-to-season also produce large load variations. The difference between peak loads during the month of July can be as much as 240 MW, and as much as 200 MW in November. Exhibit_MDT-RFP-2B provides graphic illustrations of the variability of NWE's default customer load.

81. A quantitative measure of the variability of the default supply load is the load factor. Load factor is the ratio of average energy consumption to peak load during a specific time period, usually one year.

Mr. Thompson stated that NWE's default supply load has a load factor equal to 58%, which he calculated as follows:

Annual energy consumption = 5,800,000 MWH

Peak load = 1,150 MW

Load factor = (5,800,000 MWH / 1,150 MW*8760 hours per year) = **58%**

More even, or steadier energy consumption by customers would produce a higher load factor.

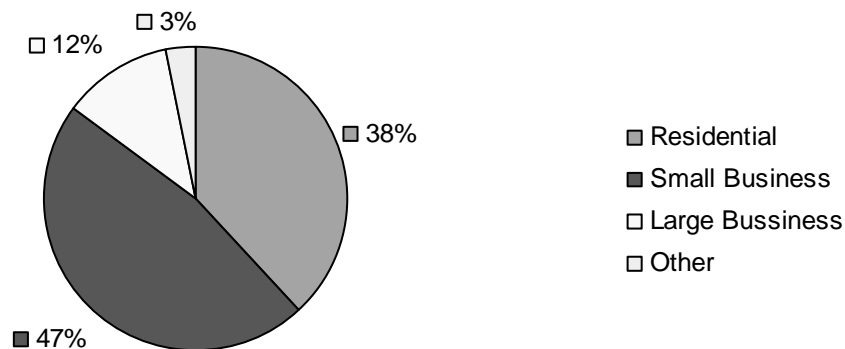
For example, Mr. Thompson testified that industrial customers typically have a load factor in the 90% range, while residential consumption patterns yield a load factor in the 45% range. Mr.

Thompson also asserted that the lower the load factor, the more expensive a load is to serve.

Chart 2 shows the annual energy consumption of various customer classes. This chart illustrates the effects of class load factors; although the residential class makes up 80% of all default supply customers, its low load factor results in a much smaller share of total annual energy consumption, 38%.

Chart 2

Percentage of Default Supply Load by Customer Type



82. Because utilities cannot generally produce electricity and store it for later use, NWE must maintain sufficient resources to produce the required electricity as it is demanded by customers. Mr. Thompson suggested that serving default customer loads, given its variability, requires a combination of different types of resources. Baseload consumption is in the range of 300 to 550 MW. The baseload portion of the load requires power supply 24 hours per day, 365 days per year. Over and above the baseload consumption, a 200 MW intermediate load exists

during certain time periods throughout the year. Since the intermediate portion of the load is not present all of the time, Mr. Thompson asserted that shaped or dispatchable resources that have lower fixed costs and higher variable costs should be used to serve this portion of the load. The top-most portion of the load is the peak and super peak portion. Mr. Thompson testified that this portion of the load should be served through a combination of dispatchable resources and market purchases. According to Mr. Thompson, understanding the default supply load and the wholesale market during certain periods of each day is an essential part of portfolio planning management.

83. The base component of NWE's load requires about 4.2 – 4.4 million MWh of energy per year, roughly 71 percent of total annual default supply energy requirements. The characteristics of the intermediate and peak load suggest that it is not cost effective to acquire additional baseload resources, even when they appear to be less expensive. There are both costs and risks associated with accepting baseload energy that is not needed to serve loads because this energy must be re-marketed, potentially at a loss. Pages 35-37 of Mr. Thompson's testimony, and Exhibit_MDT-RFP-6 graphically illustrate the hourly, daily and seasonal variation in default supply loads.

84. Mr. Thompson stated that for the last two years NWE has analyzed the impact of intermittent wind generation on the transmission system as well as its potential as a resource within the default supply portfolio. These analyses included modeling actual hourly wind generation patterns at various sites on NWE's system. NWE determined that some sites are capable of producing energy which corresponds to late afternoon peak default supply load periods. The price of wind generation is not subject to fuel cost escalation or other market impacts and the raw cost of wind generation is low compared to market alternatives, thereby providing a hedge against market purchases and/or the fuel costs associated with dispatchable resources. Additionally, as a renewable resource, wind generation addresses one aspect of the Commission's procurement guidelines. Finally, Mr. Thompson stated that wind sites in Montana tend to demonstrate higher capacity factors than other sites in the Pacific Northwest.

85. With respect to the costs of integrating intermittent wind generation into the portfolio, Mr. Thompson testified that NWE has determined that dispatchable resources are needed in the portfolio for a number of reasons including to address variable and peak load requirements, provide a portion of load following, provide operating reserves and back-up unit contingent

resources. If dispatchable resources are included in the portfolio, a limited amount of wind generation can be reliably integrated internally for approximately \$5.00 per MWh. Mr. Thompson asserted that this internal integration cost estimate is consistent with costs identified by BPA and PacifiCorp for internally integrating wind resources into their systems. NWE also investigated the cost of procuring third party (external) wind integration services and determined the range to be between \$7.00 and \$14.00 per MWh. However, Mr. Thompson stated that because of some system flexibility, NWE believes the actual cost for third party integration services will be \$9.00 per MWh or less.

86. With help from its Technical Advisory Committee, NWE developed a policy for evaluating potential avian impacts associated with proposed wind projects. Developers seeking to sell wind generation to NWE must agree to follow the policy. The policy is included in Mr. Thompson's testimony as exhibit MDT-RFP-11 and requires developers to coordinate with, and perform studies recommended by, the U.S. Fish and Wildlife Department. According to the policy, before being selected a proposed project's site must pass a Potential Impact Index review.

Modeling

87. NWE uses both deterministic and probabilistic analyses in its portfolio modeling work. Excel spreadsheets are used to quantify static portfolio impacts and screen resources based on price comparisons. Probabilistic analyses are used to assess the myriad uncertainties involved in long-term resource planning and acquisition. Monte Carlo simulation, which underlies the PCI GenTrader® model NWE uses, is a type of probabilistic analysis. A Monte Carlo study requires an analyst to assign probabilities to variables whose future values are uncertain, for example default supply customer consumption, wholesale electricity prices and natural gas prices. The probabilities are usually determined from a combination of historical data and informed judgment. Computer software randomly combines possible outcomes using a technique that mimics rolling dice.³ A single computer run may involve thousands of "rolls of the dice." The results of these model runs are analyzed using statistical information on means, standard deviations and confidence intervals.

88. Mr. Thompson testified that the PCI GenTrader® model is an asset and portfolio optimization model appropriate for detailed analyses of specific resource portfolios.

³ *Integrated Resource Planning for State Utility Regulators*. The Regulatory Assistance Project, June 1994. See also NWE's Electric Default Supply Procurement Plan, Book 1, Tab 6. January 2004

GenTrader® focuses on risk and resource optimization rather than supply adequacy as the AURORA model the NWPCC uses. According to Mr. Thompson, GenTrader® uses robust risk quantification and modeling software and is used by such companies as AEP, Duke Energy, CLECO, Entergy, OG&E, PG&E, TXU and Xcel.

89. GenTrader's® stochastic (meaning random) portfolio valuations result from Monte Carlo analyses using over 5,000 simulations (rolls of the dice). Deterministic (intrinsic) valuations are based on pre-set input values for variables such as electric prices, gas prices, loads, etc. GenTrader's® stress tests isolate specific variables and identify key risk drivers using intrinsic calculations. The Company conducted stress tests using actual natural gas and wholesale electricity market prices that occurred during the period 2000 – 2004. NWE uses a risk-adjusted mean portfolio cost as a leading indicator of portfolio performance in the stochastic modeling.⁴ Exhibit MDT-RFP-16 contains additional information on the GenTrader® portfolio analysis model. Additionally, Mr. Thompson testified that NWE's modeling analyses encompass a time period running from 2007 through 2017, thus addressing one of the Commission's identified concerns with the analyses presented in NWE's 2004 default supply plan.

90. NWE used both historical and forecast electric and natural gas prices in its portfolio analyses. As already explained, NWE used historical prices from 2000 – 2004 in its stress tests. NWE used four different price forecasts in the stochastic modeling to test the sensitivity of portfolio performance against various market conditions. Mr. Thompson stated that all price forecasts have been updated since the 2004 default supply plan to reflect higher electricity and natural gas market prices. The primary price forecast NWE used is derived from the Northwest Power and Conservation Council's (NWPCC) electricity and natural gas price forecast published in December 2004. Based on the NWPCC price forecast, NWE developed a "Commodity Trends" price forecast that it believes is a better reflection of actual price movements in a commodity market. Rather than being linear over the forecast period, NWE's Commodity Trends forecast moves up and down through the probability range established in the NWPCC forecast. Mr. Thompson indicated that the result is a single price forecast that captures the

⁴ The risk-adjusted mean is determined by adding 70 percent of the stochastic mean portfolio cost to 30 percent of the 95 percent confidence level portfolio cost. The affect is to adjust the mean cost upward more for portfolios that have more risk.

effects of high, medium and low priced years. Using the NWPCC price forecasts as the starting point, NWE developed hourly prices for five separate price periods: mid-peak, super-peak, off-peak, Saturday and Sunday. Exhibit MDT-RFP-19 provides additional detail on the Commodity Trends price forecast, NWPCC's price forecasts and forecasts developed by other regional utilities.

91. Exhibits MDT-RFP-20 and MDT-RFP-21 provide the results of the stress tests and stochastic portfolio modeling for 7 and 13 portfolios, respectively. Mr. Thompson indicated that hundreds of different portfolios were analyzed. Successive portfolios are designed to build on one another in order to identify the effect of adding or modifying individual resources in a portfolio.

Judith Gap wind project

92. According to Mr. Thompson, NWE selected the Judith Gap wind project because wind contributes to the lowest cost – lowest risk portfolio and the Judith Gap project was clearly the most attractively priced bid submitted in the all-source RFP. Mr. Thompson asserted that the price negotiated with Judith Gap is the lowest price NWE has seen for wind projects in the Northwest, based on publicly available information. In particular, Mr. Thompson believes the innovative pricing structure will contribute to economically integrating the project into the portfolio.

93. Since the Judith Gap project was previously shortlisted following NWE's specific wind RFP in 2003, NWE had already conducted significant due diligence on the project site. And the fact that the project had received a transmission interconnection agreement provided NWE reason to believe that the project could be physically and reliably interconnected to the transmission system in a timely manner.

94. Mr. Thompson stated that the average annual price under the Judith Gap power purchase agreement is estimated to be \$31.71 per MWh over the term of the agreement (see RDR MCC-013). He noted that this price includes a property tax pass through and assumes that pending legislation will be approved and will reduce the property tax for wind projects. If the legislation is not passed, the price would be about \$2.00 per MWh more. The project would consist of between 135 and 150 MW of installed capacity, at the developer's discretion, with an estimated capacity factor of 37%. Annual energy production is estimated to be about 450,000 MWh, or about 7.7% of total energy requirements. The term of the agreement is 20 years.

95. The Judith Gap project is dependent on receiving federal Production Tax Credits (PTC). Mr. Thompson stated that in order to ensure that the project will be constructed in time to be eligible for the PTC, NWE negotiated a substantial liquidated damages delay and/or failure to deliver clause that requires Judith Gap to compensate NWE up to \$8,000,000 if the project is not operational in 2005. The power purchase agreement also specifies a 94% availability guarantee with a financial penalty if the availability is not maintained.

INTERVENOR PREFILED TESTIMONY

Prefiled response testimony of John W. Wilson (for Montana Consumer Counsel)

96. Dr. Wilson recommended approval of the Judith Gap project with conditions. He identified the following as positive features of the proposed Judith Gap wind resource: (1) it would contribute to reducing the dominance of PPL Montana in the NWE control area, which Dr. Wilson said is an important policy objective; (2) the pricing terms for this resource, which shifts some of the wind timing risks away from default supply customers, are attractive compared to other bids and, when combined with an economical firming resource, could help to constrain future market price increases; (3) planning for the project is moving along and includes findings of no significant negative impact by environmental agencies; and, (4) the addition of Judith Gap would diversify the default supply portfolio.

97. Dr. Wilson noted that NWE assumes the recently approved Basin Creek resource will provide 15% of the required dispatchable supply to firm the Judith Gap project and that the remaining 85% would be provided by a lower cost combined cycle project, which Dr. Wilson said was intended at one time to be the Montana Megawatts, Inc. (MMI) combined cycle unit in Great Falls. However NWE has not submitted any other dispatchable resource proposal in this filing. Dr. Wilson argued against approving the Judith Gap project without protecting default supply customers from the risk of open-ended firming costs.

98. According to Dr. Wilson, MCC would have preferred NWE to submit the firming resource (presumably MMI) and wind proposal together to be considered by the PSC at the same time. Since that did not happen, he recommended that, if the Commission approves the wind contract, the approval be contingent on a \$5.00/Mwh cap for firming costs. He pointed out that NWE estimated the internal firming cost of wind with a companion combined cycle resource such as MMI at \$5.00/Mwh.

99. Dr. Wilson also noted his minor concern that Section 2.18(b) of the proposed wind contract provides for only 60 days to consider additional turbine capacity; he suggested conditioning approval upon extending this period to 120 days, unless NWE demonstrates a compelling reason for the 60-day limit.

100. Regarding the issue of the merits of wind site diversification versus a single-location project, Dr. Wilson agreed with NWE's conclusion that the estimated benefits of site diversification do not outweigh the price advantage of Judith Gap.

Prefiled response testimony of Ann Gravatt (for Renewable Northwest Project)

101. Ann Gravatt is the Senior Policy Associate with the Renewable Northwest Project (RNP). The March 31st deadline within the Judith Gap contract is tied to the federal Production Tax Credit for wind power. The credit expires on December 31, 2005. In order to take advantage of the credit, the Judith Gap project must be operating by December 31, 2005. In order to be operating by December 31, project construction must begin in the spring.

102. RNP believes that, if the March 31st deadline is missed, Montana will lose the opportunity to develop a wind project in 2005. The current RFP was issued in July 2004 and the Judith Gap project was chosen. If this project is not completed in 2005, NWE and its customers will lose the opportunity to reap the benefits of a wind project.

103. Montana has the best wind resource of the 11 Western states. It has been estimated that Montana's wind resource could supply 15 percent of the nation's electricity needs. However, Montana's wind resource is vastly underdeveloped in comparison to many of the neighboring states, most with significantly less robust wind resources. Oregon and Washington have a combined 503 MW of wind power operating and serving customers. Wyoming has nearly 300 MW of wind, and the Dakotas are rapidly developing their wind resource.

104. Renewable resources provide resource diversity, reducing risks associated with over-reliance on any single source of electricity. Wind power has no fuel cost. Renewable resources help to stabilize electric rates over the long-term. Given the increasing frequency of dry (or low) water years and the record high price of natural gas, a diverse portfolio is essential for any prudent utility.

105. Wind offers significant environmental benefits. Wind power does not create any waste nor does it rely on the region's increasingly limited water supply.

106. Renewable resources offer utilities risk mitigation benefits. They provide fuel cost risk protection because renewables have no fuel cost. Renewables offer a fixed price for the life of the project (20 years for Judith Gap). Wind power also offers protection against the risk of future environmental regulation of carbon emissions.

107. A portion of the Judith Gap Project will be built on state land. The lease with the state will generate approximately \$50,000-\$70,000 per year, money that will be used to fund public schools and colleges.

108. Every major investor-owned utility in the Northwest and many public utilities are planning to acquire wind power to serve their customers. This fact is the best indication that utilities are recognizing the positive benefits that renewable energy can bring to a portfolio of resources. In 2005, PGE will acquire 75 MW from the Klondike Project in Oregon. Puget Sound Energy has announced its plans to purchase 380 MW of wind from two projects in Washington, the 150 MW Hopkins Ridge Project, and the 220 MW Wild Horse Project. Both projects are expected to commence construction in 2005.

109. The cost of wind power continues to decline dramatically, to the point that wind power is cost competitive with other new generating resources today. PGE's acquisition of 75 MW of wind in 2005 was recently deemed to be "at market." Puget Sound Energy recently concluded that the costs of wind power compared favorably with other new sources of generation.

110. The busbar cost of the Judith Gap Project is the lowest Ms. Gravatt is aware of in the Northwest.

111. The 5th Power Plan by the Northwest Power and Conservation Council calls for the development of almost 2,000 aMW (6,000 MW capacity) of wind power over the next twenty years. The Western Governors' Association issued a Clean Energy resolution last June which calls for 30,000 MWs of clean energy by 2015 in the 18 western states. These developments indicate the growing interest in clean energy, like wind power, in the west.

112. The Federal Energy Regulatory Commission (FERC) has identified the need to eliminate transmission barriers for wind in order to facilitate competitive integration of new resources. FERC is investigating changes to the imbalance portion of the Open Access Transmission Tariff in order to eliminate penalties which are inappropriate for wind generators. FERC is hosting a conference on conditional-firm transmission services and other new

transmission products that can help create more available transmission capacity to serve new generators including wind resources.

Prefiled response testimony of Elliot Mainzer (for Renewable Northwest Project)

113. Mr. Mainzer is a manager for the Bonneville Power Administration (BPA). In this Docket Mr. Mainzer is appearing on behalf of the Renewable Northwest Project. He is the Manager of Pricing, Transaction Analysis and Renewables within the Bulk Marketing Division of the Power Business Line. BPA currently purchases the output of five wind projects located in the states of Wyoming, Oregon and Washington with a total installed capacity of 198 MW. Mr. Mainzer is responsible for assessing and managing the costs of integrating these wind projects into the BPA control area. Mr. Mainzer has become familiar with NWE's transmission system, its contractual generating resources, and the company's operational practices. On December 2, 2004 Mr. Mainzer met with Ted Williams who is employed by NWE Transmission to discuss the operational requirements of the NWE control area with respect to wind integration.

114. Wind integration refers to the process of incorporating the variable output of a wind project into an electrical system in a manner which is consistent with control area reliability and best utility practice. Unlike other generation technologies, such as gas turbines or coal facilities, which operate at fixed levels of output for sustained periods of time, wind projects are intermittent sources of generation. They only produce electricity when the wind is blowing. When the wind is actually blowing, the output of the project can vary from moment to moment due to changes in wind speed and intensity. Wind actually behaves more like an electrical load than a source of generating capacity. Loads are constantly fluctuating up and down. Utility operators use their generating resources to match these changes in load so generation and load are in constant balance.

115. Utilities use a combination of dispatchable generating resources and market purchases to meet the hour-to-hour changes in loads. This is referred to as load following. Utilities must also manage very short-term fluctuations that occur on a minute-to-minute basis. This is referred to as regulation. Utilities typically use generators which have "automatic generation control" or AGC to provide regulation (i.e. the Basin Creek plant). These units respond automatically to short-term changes in load/resource balance. All utilities are experienced in the provision of

load following and regulation service. Utilities that have studied the operational requirements of integrating wind have not found it to be outside the scope of their common experience.

116. When considered alone, the output of a wind project may appear quite variable. When introduced into a total resource system, much of this variability is diminished. An electrical utility system is essentially a portfolio of loads and resources that is in a constant state of change. Typically, variations in wind output are not highly correlated with movements in loads and other system resources. As a result, actual effects on the system from changes in wind output are offset by what is happening elsewhere on the system from changes in load and other resources in the portfolio. Including a variety of resources in an electric utility's portfolio is called diversification.

117. Diversification allows for a relatively volatile wind resource to be introduced into a portfolio of loads and resources without dramatically increasing the variability of the entire portfolio. A small wind project introduced into a large system may have next to no measurable impact. As the amount of wind is increased relative to the size of the entire utility system, the resulting increase in system variability becomes larger. At some point, this increase in variability will require a utility to acquire additional regulating and load following capability in order to maintain the system's load and resource balance. The benefits of diversification limit the amount of incremental regulation and load following that a utility must procure, thus keeping integration costs quite manageable.

118. All generating resources including wind must purchase operating reserves from the control area operator. Operating reserves are a component of the process of incorporating wind into a utility system.

119. Costs of wind integration have been studied by numerous utilities and others. BPA has studied wind integration. In 2002 BPA contracted with Eric Hirst to conduct a study on the impacts of integrating 1,000 MW of wind into the BPA control area. Prior to this study, BPA was concerned that integrating a substantial amount of wind could have cost as much as \$20.00/MWh. The results of the study indicated that these costs would be below \$5.00/MWh. BPA now offers integration services to other utilities for \$4.40-\$6.00/MWh, depending on the type of service required.

120. The various studies on wind integration have consistently concluded that there are costs associated with integration, but those costs are relatively small, they are system-specific,

and they depend on the amount of wind generation within a utility's overall system. These studies have concluded that the costs of wind integration are in the range of \$1.50-\$5.50/MWh. One of BPA's integration services (Storage and Shaping Service) is priced at \$6.00/MWh, which is outside the cost range cited above, but the service has features that go beyond the basic practice of simply integrating wind into a control area. BPA's more basic wind integration service, which is similar in operational profile to NWE's requirements, is priced at \$4.50/MWh.

121. NWE's analytical methodology and cost estimates for wind integration are consistent with the findings of other utilities across the United States. NWE's estimate for the amount of additional regulation required to integrate the Judith Gap wind project (0 +/- 15 MW) is consistent with other utility analyses, including those of BPA. NWE's analysis has also verified that the variability in wind output is not highly correlated with the variability in their loads and other resources, thus demonstrating the benefits of diversification in limiting integration costs.

122. NWE has wisely taken a multi-faceted, least-cost approach to wind integration. It proposes to use the combination of resources (dispatchable resources, market sales/purchases and dynamic scheduling) that is most suitable to wind integration during any particular period, given the nature of loads, market prices, wind output level and output variability. Mr. Mainzer agreed with NWE's contention that dispatchable resources will complement a wind resource, ensure greater control area reliability, and help limit market exposure to purchases of additional "firming" energy when the wind project is generating below forecasted levels. NWE's trading capabilities will be useful in supporting wind integration. NWE has adopted an intelligent strategy towards wind integration. Over time, the company will develop valuable expertise in managing the output of a variable wind resource and will be able to further refine, and potentially further reduce, the cost of integrating wind resources into their portfolio.

123. Mr. Mainzer points out that not knowing the precise integration cost of the wind project is not something to be concerned about. The busbar price of a wind project is comprised almost entirely of capital costs. These costs are fixed and known over the life of the project. Since a wind project has no variable fuel costs and extremely small variable operating costs, there is little uncertainty around the total cost of wind generation over the life of the project. Integration costs can be narrowed down to a range, and, based on the experience of other utilities, can be expected to fall within that range.

124. Mr. Mainzer compared the busbar price of the Judith Gap project to other wind projects and found that Judith Gap appeared to be a very competitive busbar price.

Prefiled response testimony of Michael J. King (for PPL)

125. Mr. King, an economic consultant with the firm National Economic Research Associates, concluded the proposed Judith Gap contract does not meet the statutory requirements for advanced approval and that the default supply procurement process is not working in Montana and should be replaced with an alternative process. He recommended denial of advance approval of this contract.

126. According to Mr. King, NWE did not comply with any of the planning and procurement objectives in § 69-8-419(2), MCA. Following is Mr. King's discussion of specific statutory objectives which he believed NWE failed to meet.

127. Mr. King argued that NWE's RFP process was not open, fair and competitive as required by § 69-8-419(2)(d). Mr. King argued NWE's process was not in accord with industry-accepted procurement practices as expected by ARM 38.5.8212(1) because the process was not truly anonymous, a substantial portion of it was not conducted by an independent third party, and it did not incorporate a consistent and systematic rating mechanism to objectively rank bids as required by ARM 38.5.8212(2)(c).

128. Mr. King claimed that, despite the fact that Lands Energy did not provide NWE the identities of bidders with its preliminary shortlist, NWE knew before that time which bids were from its affiliates. NWE would easily have identified Bidder 23 as PPL because all the long-term bids from Bidder 23 were numbered 23.x and, in addition, the PPL slice-of-the-system bid (numbered 23.9) that NWE invited PPL to bid into the RFP was the only slice bid NWE received. Mr. King argued NWE was biased against PPL's bids as demonstrated by the results, in which NWE included both of the preliminarily short-listed bids from its affiliates on its final shortlist, but included just two of the ten PPL short-listed bids on the NWE final shortlist.

129. According to Mr. King, his concern that a substantial portion of the RFP process was conducted not by an independent third party but by NWE is justified because, after Lands Energy forwarded to NWE its preliminary shortlist of 20 long-term bids, NWE conducted all further evaluation, negotiation and decision-making without the participation of Lands to ensure the fairness of those activities. Mr. King commented that NWE should not be in the position of

evaluating bids when it has a stake in the outcome, as is the case when either affiliate transactions are involved or its own generation projects (if NWE is allowed at some point to bid its own projects into an RFP and subsequently rate-base them).

130. Regarding his contention that NWE's rating system for ranking bids did not comply with ARM 38.5.8212(2)(c), Mr. King said NWE's testimony and responses to data requests do not document any systematic or objective rating system. He added that the objective and systematic rating requirement was violated because PPL's bids were held to a different standard than other bids as evidenced by Mr. Corcoran's and Mr. Thompson's testimonies, which, Mr. King claims, indicated that NWE compared PPL's post-2007 bid with its current and past prices.

131. Mr. King argued that NWE failed to satisfy the objectives at § 69-8-419(2)(a) and (b), MCA, that it provide adequate and reliable default supply service at the lowest long-term cost and evaluate the full range of cost-effective options. According to Mr. King, the energy costs of the Judith Gap project were specified in the contract, but NWE has not fully provided the long-term costs of the Judith Gap project because it has not determined the costs of wind integration, possible transmission system reinforcements, and possible additional property taxes if the proposed Montana legislation to reduce property taxes for wind facilities is not enacted. Mr. King also contended that NWE did not conduct a cost-effectiveness test of the wind resource by comparing its total long-term cost with the costs of alternative bids. According to Mr. King, NWE analyzed the costs and risks of various portfolios, but presented in this filing only results from irrelevant portfolios NWE does not intend to procure. Mr. King provided what he termed to be a "risky and incomplete" estimated range of total cost of the Judith Gap resource at \$37.28-\$41.11+/Mwh. (Exhibit MJK-3, page 18) He argued that a comparison of that estimated cost range for an intermittent wind project with the value of \$36.50/Mwh assigned by NWE for the shaped product specifically shaped to match default supply needs that NWE asked PPL to bid, led to the conclusion that the total cost of the Judith Gap does not comply with the statutory objectives that default supply be procured at the lowest long-term total cost and that cost-effective options be evaluated.

132. Mr. King claimed the Judith Gap project will not provide default supply services at just and reasonable rates as required by § 69-8-419(2)(e). Mr. King, reiterating his contention that the cost estimate for the proposed wind project exceeds the value that NWE attributed to

PPL's shaped product, argued the wind project's higher cost will result in rates that are not just and reasonable.

133. Mr. King argued NWE's modeling and analysis of Judith Gap do not comply with ARM 38.5.8213. Mr. King claimed that, although NWE presented its modeling results of 13 individual portfolios, its analysis is irrelevant because it did not model the portfolio NWE intends to procure. He said that even if the modeled portfolios contained the appropriate resources, NWE would also have to compare the optimal portfolio with and without Judith Gap to evaluate Judith Gap's contribution to the portfolio and to provide the necessary information to conduct a cost-effectiveness analysis. Mr. King argued that because, in his opinion, NWE did not present sufficient analysis to support the Judith Gap resource in the context of the preferred portfolio, there is not a sufficient basis to grant advance approval of the project. Mr. King added that NWE's portfolio analysis did not include the creation of an "efficient frontier" chart that he said is typically included in portfolio modeling to compare the costs and risks of alternative portfolios and conveniently identifies and compares efficient portfolios. NWE also frequently used unproven or less than rigorous techniques and models, according to Mr. King, citing as an example the power price curve NWE used in its portfolio analysis which, he said, was so flawed as to result in a meaningless price series. He also expressed concerns about whether NWE properly modeled market prices and price volatility and whether it was appropriate for NWE to use inputs to its modeling resources that were not identified in the RFP.

134. Mr. King commented that the procurement process and analysis conducted by NWE had as their purpose reinforcing the case for the two affiliate transactions (the yet-to-be-considered Colstrip 4 proposal and the yet-to-be-filed MMI project). He argued that if the Commission pre-approves a large wind project like Judith Gap, it will have to approve some type of wind integration services, such as those that could be provided by MMI. Mr. King commented that NWE should have submitted with the Judith Gap filing the cost of wind integration based on two alternatives – firm bids from third party services and the cost of MMI.

135. According to Mr. King, the Commission should deny advance approval of the Judith Gap contract because NWE has not demonstrated it is in the public interest, or that the total price, term and quantity of the proposed resource is reasonable, or that NWE reasonably attempted to comply with the statutory requirements for default supply planning and procurement.

136. Mr. King said he believes the default supply procurement process is broken and recommended the Commission consider alternatives to the existing default supply procurement process. He suggested adoption of either an auction process such as the one used in New Jersey or a competitive solicitation or RFP process, such as the one just enacted in Utah last month.

Prefiled response testimony of W. Kent Palmerton (for PPL)

137. Mr. Palmerton recommended the Commission deny the application for advanced approval of the Judith Gap contract. Alternatively, he suggested deferring approval until NWE completes various studies and proposes how to implement and pay for the studies' recommendations. According to Mr. Palmerton, the reliability of the NWE transmission system could be jeopardized if the Commission grants pre-approval of the Judith Gap contract when NWE has not sufficiently studied and mitigated the impacts and costs of that project's interconnection and subsequent operation. Mr. Palmerton stated that, even if NWE eventually does perform the necessary studies, it may not have done so early enough to include costs in the interconnection agreement and that the Commission will have lost its opportunity to evaluate whether the costs of Judith Gap satisfy statutory requirements.

138. Mr. Palmerton began his argument that interconnection of a new generating resource may cause adverse impacts by explaining that any generator increases flows on transmission lines and subjects the system different flow patterns and system responses. The interaction of a new generator when the transmission system is under stress may result in adverse impacts like overloads and system instability. Network response changes over time as a result of load growth and changes in transmission and generation. Mr. Palmerton said all of these impacts for future periods should have been studied by NWE before an interconnection is allowed.

139. Mr. Palmerton was satisfied that NWE's revised 2004 Judith Gap facilities study and the 2005 generator interconnection agreement addressed limited localized impacts and issues of the proposed project. However, Mr. Palmerton expressed puzzlement that NWE did not provide a series of high quality and comprehensive system impact studies. He commented that all NWE produced related to system impacts were an outdated 2002 study that evaluated the interconnection of the then-proposed WindPark project near Judith Gap, and a 2002 NWE study titled "Project #4 Coexisting System Impact Study." He commented that the two studies were nearly three years old and did not appear to incorporate any more recent changes, they did not

assess the present proposal for a single 230-kV interconnection, and that neither study was a transmission service study.

140. Mr. Palmerton said NWE should perform more studies because the addition of any resource to a transmission system can cause adverse impacts. He stated that wind is uncontrollable, it cannot be dispatched to a given level, and its output may range from maximum to zero. He commented that preliminary studies already project overloads on the system and he expected a study to look ahead one to five years to ascertain that the interconnection would not jeopardize the system.

141. Mr. Palmerton claimed that system impact studies in 2002 by NWE indicated that the addition of WindPark would overload transmission lines or transformers. The study concluded that system upgrades required to accommodate the full project output of 181.5 MW would include reconductoring the entire Judith Gap – Harlowton – Broadview line, and upgrading the Judith Gap transformer. Mr. Palmerton claimed that the second NWE study indicated similar overloads and that NWE's transmission capacity would be exceeded at times when all generation in Montana is at maximum output and customer load is light. In those instances, either curtailment will occur or system improvements will be needed to accommodate maximum delivery at all times. Simulated faults on the 230 kV line severely depress the voltage at Judith Gap and at the connection busses for the project. For faults close to the project, generator tripping would probably be necessary both to protect the generators and protect quality of service for customers in the Judith Gap area.

142. Mr. Palmerton stated that the two studies both indicated the potential for overloads of both transmission facilities and the Judith Gap auto transformer, and the need for a remedial action scheme. However, the studies evaluated two different plans of service. Mr. Palmerton noted that the proposed Judith Gap proposal apparently presents a third plan of service that limits the value of the two system impact studies, but the new plan of service does not make system overloads any less likely.

143. Mr. Palmerton commented that the most problematic situation created by wind would be at or near conditions that would limit output or when it is very gusty and unpredictable. He stated that Judith Gap's output could be nearly 40 percent of the default supply load during minimum load periods and 32 percent of minimum control area load. Mr. Palmerton said that, on average, the wind resource may be expected to be less during these times, the system should

be studied and planned to accommodate 100% of Judith Gap during minimum system loads. Also even though the wind cut-off speed is not expected to occur often, such events need to be studied for all system conditions.

144. Mr. Palmerton stated that these characteristics affect the transmission system because, as wind energy varies, other generators or net interchange from other control areas must make up the difference. When a contingency is experienced on the system, wind cannot respond to the needs with additional output, and may in fact move in the opposite direction from the needs of the system. He asserted that small wind sources, less than 20 MW, could be accommodated.

145. Mr. Palmerton explained that when over speed cutoff occurs, generation drops to zero. When this occurs, the transmission system responds immediately to any disturbance by trying to accommodate the changes in flow. If all performs as designed, the transmission remains stable. If the system is not planned for those contingencies, there could be a number of calamities that could occur.

146. Mr. Palmerton stated that generation resources could be affected as well by those system problems. Generators on the system will try to respond in a manner that prevents the system from going down. This happens on an almost instantaneous and unplanned basis which takes its toll on those other generators. The worst case is that the system can go unstable and generators can be destroyed.

147. Mr. Palmerton stated that the studies provided by NWE are not current and that NWE does not appear to have performed any additional studies relating to interconnection and integration of Judith Gap and that the studies do not sufficiently describe potential impacts from the project. Mr. Palmerton claimed NWE's relied on a nearly three-year-old 2002 impact study that does not contain forward looking data and fails to address reactive margin requirements and adjust for changes in the resource queue. Mr. Palmerton noted that the information disclosed by NWE does not contain any changes since 2002, but they may exist.

148. Mr. Palmerton said it is typical to include forward looking analysis in a system impact study, and it is essential to know the problems that the interconnection of a new resource may cause, not just today, but in the future. Mr. Palmerton said he expects NWE to prepare an updated facilities study and added that NWE conceded that it needs to complete additional system impact work. Mr. Palmerton said there is a good chance that the additional transmission

studies may cause NWE to spend money to alleviate adverse impacts, which, in Mr. Palmerton's opinion, is why NWE should design a comprehensive study plan.

149. Mr. Palmerton pointed out that that NWE has failed to follow numerous laws, regulations, standards and guidelines for interconnecting to a transmission system and operating that interconnection. Examples he provided were the WECC/NERC planning standards, the WECC minimum operating reliability criteria, the FERC's interconnection standards, and Montana laws and rules requiring reliable default supply services (§ 69-8-419(2)(a), MCA) and transmission constraints (ARM 38.5.8219).

150. Regarding the NERC/WECC planning standards, Mr. Palmerton stated NWE fails to comply because NWE's system impact studies do not include all the information required in the standards.

151. Mr. Palmerton argued that NWE's Judith Gap proposal will not comply with the WECC minimum operating reliability criterion which requires NWE to maintain a minimum operating reserve. According to Mr. Palmerton, NWE has admitted it will have to take additional measures to comply due to the intermittent nature of wind, but Mr. Palmerton does not believe NWE's planned measures to increase the predictability of the hourly wind availability can eliminate the output variability. Mr. Palmerton contended that Judith Gap cannot avoid the loss of its entire output during high wind conditions and, from an operations perspective, that means the control area operator and transmission system must be able to withstand a sudden loss of generation from 13 percent to 32 percent of its committed generation to serve firm load. Mr. Palmerton claimed other generators in the control area or across regional ties into the control area will likely provide any response to a system contingency.

152. Regarding the FERC interconnection standards, Mr. Palmerton contended that NWE failed to comply with them by either not performing system studies or producing the analysis. He added that NWE failed to take into account the conclusions produced by its own studies that indicate the presence of Judith Gap output, without mitigating measures, caused overloads on system components and also required at a minimum coordination with other remedial action schemes employed to address system impacts associated with operation of the Colstrip project.

153. Mr. Palmerton stated that the costs to remedy those limitations on the system are difficult to determine but, taking into account various possibilities such as installation of a new 230 kV line from Judith Gap to Great Falls, implementation of a remedial action scheme,

providing additional operating reserve, and compliance with various extra regional ancillary support contracts, Mr. Palmerton concluded \$10 million is not an unreasonable estimate of the costs of transmission upgrades associated with Judith Gap.

154. Mr. Palmerton added that due to the variable operating conditions of Judith Gap and taking into consideration the large size of Judith Gap generation relative to NWE default supply load, NWE will have difficulty in maintains sufficient operating reserve without incurring additional direct and indirect costs of operation.

155. Mr. Palmerton summarized his conclusions regarding the impacts of the wind proposal on NWE's system and other affected entities by stating that NWE should perform a complex set of system impact studies, evaluate the results, inform affected parties, perform further analyses if necessary, determine a course of action and costs, implement it, provide for cost recovery and monitor compliance on an ongoing basis. He contended that the reliability threat is that if Judith Gap drops off-line, it will decrease the generation necessary to meet load and, in the worst case, lead to widespread power outages. He commented that NWE's recent comments to FERC in Docket AD04-13-000 indicate NWE is aware of the potential for increased costs to integrate wind.

156. Mr. Palmerton said it is impossible to determine the total direct and indirect costs of the Judith Gap contract, there are a number of potential risks that NWE has not even identified or proposed to mitigate, that there is no way of knowing the burdens of Judith Gap may pose to system reliability, and the large size of the project exacerbates the threats to reliability.

Prefiled response testimony of William A. Pascoe (for Exergy)

157. Mr. Pascoe of Pascoe Energy Consulting recommended the Commission deny approval of the Judith Gap contract at this time and establish a new procedural schedule that does not limit the scope of the proceeding and participation of intervenors. Alternatively, he suggested approval of a smaller 50-75 MW contract with Judith Gap and taking time to fully explore wind integration costs before making decisions on the remaining wind portion of the portfolio.

158. Mr. Pascoe did not disagree that adding 150 MW of wind power to the NWE portfolio would be a good addition, but he said the wind component should be spread over multiple sites. He argued that wind site diversity reduces risk and is important because of the intermittent nature

of wind resources and the wind integration costs that result. He commented that the 150 MW of wind power proposed by NWE in relation to the size of its control area is much more than the wind power currently integrated by PacifiCorp and BPA, and that those entities' wind resources are spread over multiple sites and have the advantage of access to flexible hydroelectric generation for wind integration purposes.

159. Mr. Pascoe argued that resource diversity results in lower levels of planning reserves as demonstrated by loss-of-load probability studies. He explained that most utilities include reserves in their supply portfolios to provide reliable service during peak load periods. He noted that NWE's portfolio management strategy apparently does not include carrying planning reserves but NWE will instead rely on the market to cover peaks. Mr. Pascoe claimed that wind site diversity would reduce the NWE portfolio's exposure to high prices and improve reliability.

160. According to Mr. Pascoe, another benefit of site diversity is that forecasting errors for wind power should be smaller with multiple wind sites than with a single site because the forecasting errors on multiple sites can be expected to be in opposite directions, at least some of the time. Mr. Pascoe argued that better forecasts will result in lower overall portfolio costs.

161. Mr. Pascoe argued that site diversity will also result in lower costs for ancillary services, identified by NWE as contingency reserves, energy imbalance, load following, and regulation. Regarding contingency reserves, Mr. Pascoe asserted that they should be about the same for a single wind site and for multiple sites with the same total installed capacity. Regarding energy imbalance, load following and regulation, Mr. Pascoe explained utilities deal with them by automatic generation control (AGC) and that, because site diversity results in lower forecasting errors, there is a reduction in the amount of AGC capacity needed for energy imbalance. AGC capacity needs are also reduced by the reduced volatility in overall wind output that results from site diversity, he claimed. Mr. Pascoe said the information in his Exhibits WAP-2 and WAP-3 support his claim that site diversity results in reduced volatility and that Exhibits WAP-4 and WAP-5 support his claim that there is more improvement in volatility as additional wind sites are added. According to Mr. Pascoe, reduced volatility results in reduced ancillary service costs.

162. Mr. Pascoe disputed NWE's estimates of wind integration costs. He acknowledged that NWE attempted to quantify these costs, including a review of the value of site diversity, during the 2003 Wind RFP process, but asserted that NWE did not further address site diversity

in the 2004 Wind RFP. He argued that NWE witness Mr. Thompson's memo on wind integration costs that was attached to NWE's response to PSC-7(b) reaches conclusions that are not supported by the attached materials and that NWE significantly erred in its method of quantifying ancillary service costs for wind integration, which led to an incorrect estimation of load forecast errors and subsequent incorrect determination of the necessary incremental AGC capacity.

163. Mr. Pascoe provided his own estimates of internal and external wind integration costs in his Exhibit WAP-7. By his estimate, single-site wind integration costs from internal resources would increase to \$7.62/MWh and to \$9.12/MWh from external resources. He asserted costs would be lower for multiple sites. According to Mr. Pascoe, analysis of capacity factor information on an hourly basis demonstrates that site diversity significantly reduces hourly volatility. In addition, he asserted the advantages of a single wind site cited by Mr. Thompson in his wind integration memo may be offset by higher wind integration costs.

164. Mr. Pascoe expressed skepticism of NWE's claim that lower costs result from relying on internal rather than external sources for wind integration, citing as one reason that it appears that NWE has not included capacity costs in its estimates of internal wind integration costs. He also claimed that NWE's estimated costs for internal wind integration failed to account for certain opportunity costs. Mr. Pascoe said that, since there is no hourly market for AGC, NWE will have to obtain the AGC needed for wind integration either from internal sources or by purchasing it from external sources, but he does not believe one can assume NWE will be able to mix and match these two options.

165. According to Mr. Pascoe, the price differences between Judith Gap (\$31.71/MWh) and the next lowest bid (\$38.50/MWh) are more than offset by the reduced integration costs that would result from multiple wind sites. He also noted that it would be reasonable to assume a reduction of \$2/MWh in the next lowest bidder's price if the same assumed property tax reduction had been applied to its bid that was applied to Judith Gap's. In his Exhibit WAP-8, Mr. Pascoe provided two examples of the slightly lower "all-in" wind power costs that he calculated would result from diversifying to two wind sites versus the single Judith Gap site: first, an example with costs calculated using prices provided by NWE in response to PSC-15 with no property tax reduction assumed and, second, an example calculated the same way but with the property tax adjustment of \$2/MWh assumed for all prices except Judith Gap, which

price would already incorporate the reduction. Exhibit WAP-8 assumes a 28 percent reduction in wind integration costs from diversifying to two sites, which Mr. Pascoe said is a reasonable proxy for the reductions in volatility and integration costs that he maintained would result from multiple sites. (According to Mr. Pascoe, by diversifying wind to more than two sites, even more reductions in wind integration costs would be possible.)

166. Mr. Pascoe said that, even though his calculations show only a slightly reduced cost resulting from diversifying to two wind sites, there are other costs and uncertainties, such as wind projects' capacity value and possible transmission and integration costs that point to rejection of the proposed Judith Gap contract in favor of site diversity.

167. According to Mr. Pascoe, there may be significant costs that will ultimately be paid by default supply customers if the Judith Gap project requires transmission upgrades, which could be the case as there are more transmission requests in the same queue as the Judith Gap request than there is available transmission capacity. Mr. Pascoe said there are other suitable locations for wind resources that would not have to compete for transmission capacity.

168. Mr. Pascoe commented that his other concerns about the proposed wind project include: the dilemma presented to the commission in considering a proposed wind contract without having the opportunity to at the same time consider a dispatchable resource proposal, presumably the MMI gas-fired combined-cycle project; the change in ownership of the Judith Gap project, which appears to constitute the same "flipping" of contracts that was a major issue in Docket D2001.10.144 and is the subject of ARM 38.5.8212(2)(f); the dismissal of Exergy's bid by Lands Energy and NWE as nonconforming, without attempting to communicate with Exergy to address its confidentiality concerns; the need for the Commission to consider the economic development advantages of developing multiple wind sites; and, whether the rationale for this extremely expedited proceeding was justified.

Public comments

169. The Commission received oral comments from over 40 individuals and received written comments from several individuals and entities. The vast majority of the members of the public supported the project. A minority of the public comments, including about seven of the individuals offering oral comment, either opposed or had questions about the project.

170. The supporters generally supported the project for the economic development it would bring to a rural area of Montana, for the environmental attributes of wind energy, for beginning to develop Montana's wind resources and for introducing fuel and corporate diversity into the default supply resources.

171. Most opponents and questioners generally advised the Commission to be cautious do to uncertainty, to demand full disclosure from NWE and to avoid any resource that benefited from favorable tax treatment described as a subsidy. Some opponents and commenters suggested the Commission place restrictions on the composition of the work force employed to build the project and to operate it after construction. These individuals were specifically concerned that prevailing wages, use of local area work force and union jobs be provided by the project. Other opponents suggested the Commission should not approve a large project, but should require small projects to spread any economic development benefits to more communities.

DISCUSSION OF ISSUES FINDINGS

172. As enumerated in the Legal Background section of this order, § 69-8-421, MCA(c) requires the Commission to make findings in three specific areas when considering an advanced approval application: (1) is the application in the public interest; (2) did the agreement result from the default supplier's reasonable effort to comply with statutory objectives; and, (3) are the price, quantity, duration, and other contract terms directly related to the price, quantity, and duration of the power supply purchase agreement reasonable. Following is a discussion of the issues raised in this proceeding and the Commission's findings.

The RFP process

173. NWE addressed this issue at length in its application and at hearing to support its position that the 2004 RFP process that resulted in the selection of the Judith Gap wind proposal was conducted in compliance with Montana law and PSC rules. The testimony and exhibits of Mr. Lewis of Lands Energy and Mr. Thompson of NWE described NWE's 2004 all-source RFP process in detail and included documentation of it.

174. PPL, through its witness Mr. King, disputed NWE's claim that the RFP process that resulted in the selection of the Judith Gap wind proposal complied with statutory and PSC rule requirements. Mr. King contended the RFP process was flawed because, in his opinion, it failed

to comport with industry-accepted procurement practices in violation of § 69-8-419(2)(d), MCA, which requires a fair, open and competitive procurement process. Examples he provided as evidence that NWE did not employ industry-accepted procurement practices as required by ARM 38.5.8212(1) were that bidders' anonymity was compromised and a substantial portion of the RFP process was not conducted by an independent third party and that NWE did not incorporate a systematic rating mechanism to objectively rank bids as required by ARM 38.5.8212(2)(c).

175. Mr. Pascoe, on behalf of Exergy, objected to the dismissal of Exergy's wind proposal as nonconforming without NWE or Lands Energy first attempting to communicate with Exergy to try to resolve concerns about the bid. He also briefly mentioned the change in ownership of the Judith Gap project, which he said appears to constitute the same "flipping" of contracts that was a major issue in Docket D2001.10.144 and is the subject of ARM 38.5.8212(2)(f). At hearing in cross-examination of NWE witness Mr. Thompson and in its post-hearing brief, Exergy argued that NWE should have informed other wind bidders of the monthly on-peak, off-peak pricing structure it had accepted in a previous Invenergy bid and that, by not doing so, the Judith Gap proposal had an unfair advantage in violation of ARM 38.5.8212(2)(b) and (2)(e).

176. Section 69-8-419 (2)(d), MCA, requires NWE's procurement process to be open, fair, and competitive whenever possible. The Commission's guidelines for resource acquisition by the default supplier are found at ARM 38.5.8212. Subsection (1) of that rule provides that a default supplier should use industry-accepted procurement practices to acquire resources and acknowledges those practices are not precisely known and may vary. The rule then describes the industry-accepted approach as including these basic steps that the default supplier should follow when acquiring resources: obtain input and recommendations throughout the process from its technical advisory committee; explore and solicit a variety of alternative resources, products and prices; analyze the price and non-price factors of the bids; develop a shortlist; negotiate the most appropriate contract; and, remain flexible in order to respond as necessary to changing circumstances.

177. No party, including PPL, presented evidence that challenged NWE's compliance with the basic steps listed above that, according to PSC rule, encompass an industry-accepted approach to resource procurement. NWE clearly established that its RFP process followed those steps. NWE consulted throughout the RFP process with its Technical Advisory Committee. The

RFP was an all-source solicitation that requested a wide variety of resources, products and prices, including a specific call for wind resource proposals. Lands Energy, in its role as independent third-party administrator of the RFP process, evaluated the price and non-price factors of the bids, including the wind bids. Based on that analysis, Lands Energy developed a preliminary shortlist that was forwarded to NWE. After conducting its own analyses on the initial shortlist bids, NWE developed a final shortlist that identified the Judith Gap proposal as the most appropriate wind proposal and negotiated the contract that is the subject of this proceeding.

178. PPL's claim that NWE's RFP process was not conducted in accordance with industry-accepted procurement practices relies on its contentions that the anonymity of bidders was not preserved in the selection process and that a substantial portion of the process was not conducted or supervised by an independent third party.

179. The PSC's procurement guidelines do not require or even specifically mention preserving bidder anonymity. However, NWE and Lands Energy prudently designed an RFP process under which bidders' identities were not provided to NWE by Lands Energy until after Lands Energy had screened the bids and developed a "blinded" preliminary shortlist and NWE had finalized the shortlist. At that point, it was necessary for NWE to know the identities of the final shortlisted bidders in order for NWE to commence contract negotiations. Although bidders' identities were not provided to NWE until NWE had developed its final shortlist, Mr. Corcoran readily acknowledged at hearing it was possible to guess the identities of some of the bidders.

I'll be the first one to tell you that although they were blind, when you work buying electricity and natural gas in Montana, the characteristics that are described of these products as they're related to location, and the different attributes, and stuff. In certain cases, you'll have a pretty good idea of who the party might be, but I can tell you then in other cases that's not the case. You don't have perfect knowledge, depending on how those bids were presented or summarized.⁵

180. Mr. Corcoran asserted that NWE's speculation as to the identities of bidders did not affect its selection of bids for final analysis. TR, p. 43.

⁵ TR, p. 43, lines 9-18.

181. The Commission approves of the steps taken by NWE and Lands Energy to preserve bidder anonymity throughout most of the RFP process. Even though the PSC's resource acquisition guidelines do not require or suggest it, the fairness of the process was enhanced by the efforts made to keep the identities of the bidders from NWE until the final shortlist stage. The Commission does not agree with PPL's contention that NWE did not comply with industry-accepted procurement practices because it was possible for NWE to guess the identities of some bidders from the information on the blinded bid summaries. There is no evidence to suggest that, even if NWE guessed correctly about some bidders' identities, such speculation affected its selection of the Judith Gap wind proposal over other wind bids.

182. PPL's claim that NWE failed to comply with industry-accepted procurement practices because an independent third party did not monitor or supervise the entire process is similarly without merit. The PSC procurement guideline that identifies the basic steps that comprise an industry-accepted RFP approach does not include any mention of using an independent third party to administer the RFP process. A relevant PSC rule, ARM 38.5.8212(2)(h), was not cited to by PPL in this proceeding. However, it provides that, when an RFP process may involve bids from affiliates of the default supplier, the default supplier should hire an independent third party to develop the RFP and review any proposed contract with an affiliate prior to the default supplier signing a contract. NWE's engagement of Lands Energy to develop, issue and manage the RFP process up to the point that it provided the preliminary shortlist meets and exceeds the expectations of the rule with respect to the activities of Lands Energy in regard to the wind resource selection process. The rule does not require or suggest that an independent third party monitor and supervise the process from start to finish. The limitation of Lands Energy's role in the RFP process was reasonable. NWE witness Mr. Thompson indicated at the hearing that NWE would not necessarily be against having an independent expert at the table at all times, but identified three reasons why NWE would have to be involved prior to final selection: 1) NWE as the default supply utility is responsible for procuring resources, 2) NWE has an intimate knowledge of its loads and its tolerances with respect to counter-party credit worthiness, 3) NWE owns the GenTrader® software used to perform portfolio analyses. For these reasons, NWE needs the ability to negotiate directly in their role as default supplier. TR, pp. 300 and 305.

183. PPL also contended that NWE did not comply with ARM 38.5.8212(2)(c), which is one of several principles enumerated in this rule that the default supplier should adhere to when

conducting an RFP process. The specific principle cited by PPL provides that the default supplier should develop a systematic rating mechanism, which does not have to be disclosed to bidders, to objectively rank bids and then document the mechanism's development and use for later presentation to the Commission. PPL argued that NWE did not provide documentation that it had developed and used a systematic bid rating mechanism. PPL witness Mr. King also claimed the standards applied by NWE to PPL's bids were different than those applied to other bids and that this alleged unequal treatment proves there was no systematic rating mechanism in place.

184. Again, PPL's contention is belied by the evidence presented by NWE that demonstrates NWE and Lands Energy did have and use a systematic rating mechanism to ensure objective ranking of bids. Mr. Lewis' testimony included a general description of the two-phase process used to evaluate the bids: quantitative (price) and qualitative (non-price) analyses by Lands Energy to develop an initial shortlist, followed by NWE's computer modeling of the shortlisted bids to identify the final shortlist proposals that would provide the most benefit to the portfolio. NWE Exhibit 2, pp. 22-23. He also explained the quantitative price ranking and analyses that were performed by Lands Energy and NWE in the selection process. NWE-2, pp. 27-30.

185. The most detailed documentation of the price and non-price rating mechanisms developed and used by NWE and Lands Energy is contained in Mr. Lewis's October 31, 2004, memo to NWE regarding the preliminary shortlist. NWE-2, Confidential Exhibit SEL-9. In that memo, Mr. Lewis described the predetermined price scoring methodology that was used to rank the bids as well as the non-price evaluation factors. The memo also included the resulting price, non-price and total combined scores for each of the four Tier 1 wind bids.

186. Additional documentation of the ranking system exists in the record. Mr. Lewis' September 27, 2004, memo to NWE regarding the Lands Energy screening of proposals included discussion of Lands Energy's use of a spreadsheet-based net present value versus market analysis to compare similar types of resources that were bid into the RFP against each other. NWE-2, Confidential Exhibit SEL-8. The memo listed several key areas of information that had been requested from all bidders and that were subsequently evaluated by Lands Energy for each bidder. Mr. Lewis testified that Lands Energy consulted extensively with NWE and the TAC's modeling subcommittee about Lands Energy's process for analyzing the non-price (qualitative)

factors of the bids to ensure it was fair. NWE-2, p. 22. At hearing, when asked by PPL's attorney if NWE had developed and used a systematic rating mechanism, Mr. Thompson replied yes and reiterated that the TAC had been involved in discussions with NWE regarding development and application of the ranking system that was used. TR, p. 220. He said the TAC meeting notices confirm this issue was discussed. He also noted that NWE is not required to disclose its rating system to bidders.

187. The RFP document itself contained a section titled "Evaluation Criteria," which informed bidders that the initial screening would employ a qualitative and quantitative review process that included the use of a "predetermined rating matrix." NWE-2, Exhibit SEL-2, pp. 6-7.

188. Mr. King's claim that PPL's bids were held to a different standard because NWE compared PPL's post-2007 bid to PPL's current or past prices has as its basis a section of Mr. Corcoran's prefiled testimony (NWE-1, p. 34, lines 1-3) that PPL itself requested be stricken from the record in this phase of the proceeding as irrelevant.⁶ This issue raised by PPL is not directly related to the proposed wind contract and is irrelevant for purposes of this phase of the proceeding, but it may be addressed in the second phase of this proceeding because it is related to NWE's request in this application for Commission comments on its decision not to replace the PPL baseload contracts at this time.

189. Exergy's objection to the rejection of its wind bid as nonconforming by Lands Energy is not credible. Mr. Lewis' September 14, 2004 "Bid Elimination Memo" (NWE-2, Exhibit SEL-4) fully documented the rationale for Lands Energy's decision, which was appropriate given Exergy's choice to submit a deficient bid that failed to include much of the information requested in the RFP. Exergy's witness Mr. Pascoe acknowledged several significant deficiencies in the Exergy bid under cross examination at hearing and the risk of rejection Exergy assumed when it decided to submit a bid that did not conform to the specific terms of the RFP. TR, pp. 333-334 and 353-354.

190. Mr. Pascoe also suggested a change in ownership of the Judith Gap wind project had occurred that might constitute a violation of ARM 38.5.8212(2)(f), which provides that the default supplier should not reassign supply contracts to an additional third party after the original bid activity and during the evaluation of bids. Although an entity named Wind Park Solutions

⁶ See Docket D2005.2.14, *PPL Montana, LLC's Motion To Strike Irrelevant Testimony*, March 17, 2005.

had bid a similar Judith Gap wind proposal into a previous NWE RFP, the proposed contract at issue in this proceeding is between NWE and WPSA Judith Gap I, LLC, now known as Judith Gap Energy, LLC, which is wholly owned by Invenergy Wind LLC. NWE explained the ownership interests in these entities in its response to PPL's data request PPL-22. Mr. Pascoe did not provide any evidence that ownership of WPSA Judith Gap I, LLC had "flipped" after the Judith Gap bid was submitted in the RFP and during the evaluation of the bids. NWE has not submitted a revised contract or any other information to indicate the principals to the contract have changed. In the absence of evidence that the contract has been reassigned to another party, the Commission can find no violation of ARM 38.5.8212(2)(f).

191. In its post-hearing brief, Exergy argued that NWE's procurement process was not open, fair and competitive because, Exergy claimed, NWE did not comply with ARM 38.5.8121(2)(b) by providing all potential bidders with the same standards and criteria by which NWE intended to evaluate the bids. In addition, Exergy alleged NWE violated ARM 38.5.8212(2)(e) by not giving all bidders in the wind RFP an opportunity to supplement their bids to address a new resource attribute or new evaluation criteria that had not been previously identified. Exergy Brief, p. 5-6. The basis for Exergy's argument is the allegation that the Judith Gap project had an unfair advantage in the 2004 RFP because, as a result of NWE's 2003 wind RFP, NWE had discussed and accepted in 2003-2004 negotiations with WindPark Solutions and its successor on the Judith Gap project, Invenergy, the same basic pricing structure contained in the now-proposed Judith Gap contract. Exergy argued that Invenergy's proposed pricing structure was considered a resource attribute by NWE and, therefore, NWE should have communicated that information to all wind bidders in the RFP.

192. The Commission disagrees with Exergy's claim that the process was unfair to other bidders. As explained by Mr. Thompson at hearing, Invenergy proposed an innovative pricing structure and discussed it with NWE as a result of being shortlisted after the 2003 wind RFP. TR, p. 160, lines 11-16. It is evident that Invenergy knew when it was requested to re-bid into the 2004 RFP that NWE had, at least informally, indicated it would accept the previously proposed pricing structure. TR, p. 161, lines 10-13. However, there is no evidence to suggest that NWE and Lands Energy favored the Judith Gap bid over others, or applied different standards or criteria to their evaluation of the Judith Gap bid than to other wind bids. There was no guarantee that NWE would select the Judith Gap project if Judith Gap chose to include the

pricing structure in its 2004 bid, given that other bidders could well have developed their own, better proposals. Market participants generally recognize the variation of on-peak and off-peak prices throughout the year. Any bidder could have offered economically rational pricing structures that reflect this variation.

193. The Commission disagrees with PPL's position that the existing default supply procurement process is broken and should be revamped. The RFP process that is the subject of this proceeding was the first to be conducted by NWE under the Commission's default supply and procurement guidelines since the company's initial default supply plan was filed and commented upon by the Commission last year. NWE applied the guidelines to its RFP process and, as is evident from the Commission's findings in this order, NWE was able to demonstrate the prudence of its selection of the Judith Gap wind resource. That is not to say that improvements to the process cannot be made as experience is gained over time. The Commission notes that, as discussed at the hearing, any person or party, including PPL, may propose changes to Commission rules at any time. PPL's New Jersey-type auction alternative was presented by Mr. King. MCC witness, Dr. Wilson, disagreed with the applicability of that alternative within the NWE's market area. TR, pp. 648-650.

Price

194. None of the interveners contested the reasonableness of the energy price contained in the power purchase agreement. The record establishes that the energy price in the agreement is a competitive and attractive price for wind resources. Lands Energy short-listed the Judith Gap project and another offer, bid 7.2, after a reasonable analysis of the nominal levelized price streams specified by eight of nine wind bids.⁷ Lands Energy also evaluated, at a basic level, each of the wind bids in terms of their affect on the current default supply portfolio. This analysis captured the unique capacity factors and generation profiles of the Tier 1 bids. The analysis conducted by Lands Energy fairly compared the wind bids based on price and non-price attributes, using criteria specified in NWE's RFP. NWE-2, p. 22. Price received a 70% weighting in the evaluation. Lands Energy eliminated the effect of the property tax pass-through in the Judith Gap bid to ensure an "apples-to-apples" comparison. TR, pp. 95-96. Following Lands Energy's selection of the two short-listed wind bids, the bidders were given an

⁷ As described in paragraph 177, Exergy's bid did not include detailed price information.

opportunity to refresh their bids, at which point bidder 7.2 increased its price by approximately 13%, while Judith Gap's bid did not change.

195. Several witnesses testified that the price of the Judith Gap resource is one of the most attractive prices for wind projects they have seen in the Pacific Northwest. NWE-3, p. 78, RNP-1, p. 6, RNP-2, p. 6. The unique and innovative monthly on-peak and off-peak pricing structure enhances the attractiveness of an already low price by making it easier for NWE to integrate the resource more economically. NWE-3 p. 76, RDR, PSC-005. Judith Gap's expected capacity factor exceeds that of bid 7.2, the other the short-listed wind project. TR, p. 167, RDR, MCC-004. And project site wind data indicate that the shape of electric generation from the project complements the daily default supply load shape. TR, pp. 167-168, NWE Late Filed Exhibit MDT-7. When wind resources are available at the project site, Judith Gap will provide low cost energy that can displace market energy purchases or provide off-system sales revenue, depending on prevailing market prices and default supply load. The project will also provide some capacity value on a statistical basis without any accompanying capacity charge. Statistically, Judith Gap will provide energy coincident with the NWE's system peak and average monthly peaks. If, in the future, WECC and/or the Northwest Power Pool explicitly recognize the capacity value of wind resources, the statistical capacity associated with Judith Gap could provide additional portfolio benefits. TR, pp. 306-308. Mr. Mainzer testified that PacifiCorp has announced that it will be awarding capacity value to its wind resources and that the California Energy Commission, with help from the National Renewable Energy Laboratory, is seriously studying the capacity value of wind resources. TR, p. 612. Finally, if Ms. Gravatt and Mr. Thompson are correct that the price of wind turbines is likely to increase (possibly by as much as 20 percent, according to Ms. Gravatt) in 2006, Judith Gap's price would represent a lost opportunity if not approved. TR, pp. 274-275, and 615.

Integration costs

196. Acquiring any wind resource requires purchasing integration services, either directly or indirectly. The record identifies a range of costs associated with integrating Judith Gap's variable energy production into the default supply resource portfolio and NWE's transmission control area. Several witnesses compared the variation of wind energy production to the minute-by-minute, hour-to-hour variability of default supply load. For example, RNP witness, Mr. Mainzer, testified that "although wind projects are sources of electricity generation, from the

perspective of a utility operator, wind actually behaves more like an electrical load than a source of generating capacity.” RNP-1, p. 2. MCC witness, Dr. Wilson, similarly stated that “the variability of a wind resource is quite analogous to the variability on the demand side.”

TR, p. 639. NWE must continually balance loads and resources today under conditions where actual load differs from expected load. Integrating wind resources into the default supply portfolio simply requires managing the net variability produced by changing load and changing wind energy production. RDR, PSC-006, PSC-010. The Commission agrees with Dr. Wilson that NWE is fully capable of managing this net variability. TR, p. 640.

197. The Commission finds that NWE is properly analyzing multiple strategies for addressing net variability associated with integrating wind resources into the default supply portfolio. These strategies include using internal resources like the PSC-approved Basin Creek natural gas reciprocating generator, a potential combined cycle natural gas turbine generator within the control area, third party purchases of integration services, dynamic scheduling opportunities and various combinations of these resources. In the near term, NWE may also be able to rely on the characteristics of certain intermediate contracts it executed through its RFP as a source of some integration services. TR, p. 319 Although the ultimate cost of integrating Judith Gap energy production into the default supply portfolio is uncertain, the Commission agrees with RNP witness, Mr. Mainzer, that NWE has adopted an intelligent strategy toward wind integration. The record strongly demonstrates that utilities in the Pacific Northwest and throughout the country have successfully integrated large and small, concentrated and geographically diverse wind resources without experiencing unreasonable costs for integration. See for example RNP-1 – specifically the chart in the attached power point slide titled *Cost Convergence*, NWE-2, RDR, PSC-007. NWE generally appears to have considered high quality, current, national analyses in developing its integration strategy. Nothing in the record suggests NWE’s cost to integrate the Judith Gap project will be outside the range of costs seen by other utilities.

198. Exergy witness, Mr. Pascoe, asserted that integration costs would potentially be less if NWE diversified the geographical location of wind capacity within the control area. The record supports the basic concept of diversification as a means of reducing integration costs. Exergy-1, RNP-1. The record also shows that NWE is aware of this basic concept and has evaluated multiple sites throughout its system. RDR, PSC-007. The Commission finds reasonable NWE’s

conclusion that Judith Gap's very attractive energy price and complementary (to load) generation profile outweighed the potential benefits of site diversification in this instance. MCC witness, Dr. Wilson, also supported this conclusion. MCC-1, p. 12. To a large extent, NWE was limited by the offers submitted in response to its RFP. It is possible that NWE could have achieved diversification through simultaneous negotiation with several attractive wind offers. But there is no guarantee that the price achieved for the Judith Gap project could have been preserved; given the prices of the two next best wind bids, it is likely diversification would have increased the overall cost of wind energy. In fact, Mr. Pascoe's Exhibit (WAP-8 rev) indicated splitting the wind capacity between Judith Gap and bid 7.2 would not have produced a lower total wind cost using his estimates of internal and external integration costs. A slight improvement (about 1% with external integration, less than 1% with internal integration) in total costs might have been achieved by splitting the wind capacity between Judith Gap and bid 14, which was not short-listed. But Mr. Pascoe's analysis is high-level; it does not reflect any differences in the specific shape of wind generation and it does not compare total portfolio costs under each scenario. Therefore, the effects of diluting the beneficial monthly on-peak and off-peak pricing structure through diversification are not accounted for. NWE's Late Filed Exhibit MDT-7 shows significant differences between Judith Gap and bid 7.2 in terms of total portfolio benefits.

199. Importantly, the record suggests that NWE could see diversification benefits within the Judith Gap project itself, which would employ 80 - 100 turbines spread over some 20 square miles. RNP witness, Mr. Mainzer, stated that BPA's largest wind project maintains a flatter output shape compared to smaller projects. Large wind projects generally involve a large geographic area with varying topography and the turbines are spread out over that area such that changes in wind speeds do not impact all turbines simultaneously. TR, pp. 455-456, RNP-1.

Integration cost cap

200. MCC witness, Dr. Wilson, recommended that the Commission cap the amount of integration costs that NWE would be able to recover through default supply rates. While NWE identified a likely range for integration costs of \$5.00/MWh to \$9.00/MWh, Dr. Wilson recommended a cap of \$5.00/MWh. He reasoned that a \$5.00/MWh cap would make the total cost of Judith Gap comparable to other non-wind resources. He said setting the cap higher than \$5.00/MWh would imply a willingness to pay a premium for other perceived benefits of wind

power. A cap higher than \$9.00/MWh would be excessive, according to Dr. Wilson. MCC-1, p 11.

201. At the public hearing, both the Montana Consumer Counsel, Mr. Nelson, and his witness, Dr. Wilson, seemed to acknowledge that the uncertainty related to integration costs is not a source of significant risk for customers. Mr. Nelson stated that the recommended cap is intended to minimize “what little risk there is to the ratepayers” from undefined integration costs. TR, p. 20. Dr. Wilson indicated that testimony at the hearing by NWE and RNP witness, Mr. Mainzer, suggested a lower level of risk than he anticipated when he drafted his prefiled testimony. TR, p. 654. Responding to a question about whether a cap on integration costs could interfere with efforts to minimize those costs, Dr. Wilson stated that NWE seems to be “genuinely focused on getting the best deal for consumers...” TR, p. 656.

202. The upper limit of Dr. Wilson’s range of acceptable integration cost caps (\$9.00/MWh) is generally consistent with Mr. Pascoe’s sensitivity analysis of NWE’s estimated integration costs (\$9.12/MWh from external resources). Exergy’s post-hearing brief characterized Mr. Pascoe’s integration cost estimates as “solid calculations of internal and external integration costs.” These costs are well above the actual experiences of other utilities, as described in Mr. Mainzer’s testimony. But even assuming a \$10.00/MWh integration cost, which is double the expected cost of about \$5.00/MWh, the impact of the difference on a typical residential customer’s bill would be \$0.28 per month, less than one-third the amount of the Universal System Benefits Charge.⁸

203. Dr. Wilson’s testimony did not explain exactly how the Commission would implement an integration cost cap. The record suggests that actual integration costs would have to be averaged for comparison against his recommended cap of \$5.00/MWh. MCC’s post-hearing brief proposed that the cap apply to average integration costs for those hours in which such costs are incurred in each month. Brief p. 6. Integration of wind represents a new resource and the Commission expects that there will be a learning curve associated with this resource. Imposition of a monthly cap is unwarranted in the Commission’s view. And given the prevailing view that the process of integrating wind involves managing the net variability of simultaneous changes in loads and wind energy output, it is not clear how certain capacity-related costs will be attributed solely to one source of variability versus another. Although Dr. Wilson suggested such issues

⁸ $((\$5.00/\text{MWh} * 455,000) / 6,000,000) * .75 \text{MWh per month} = \0.28 per month

might be resolved through additional work by Commission staff, MCC and NWE, this additional process seems unwarranted given the acknowledged minimal risk related to integration cost uncertainty. In the long-run, evaluating the prudence of actual integration approaches used by NWE in the annual electric tracker appears to be a better approach for encouraging innovation, incorporating best practices and minimizing costs.

204. MCC's desire to protect ratepayers from taking on risks they cannot control is reasonable. However, the Commission's role is to pass judgment on whether NWE's proposal to add a new resource to the default supply portfolio is reasonable and in the public interest. The Commission can best serve this purpose by evaluating all aspects of the proposed resource, including any risks related to uncertain costs, and determining whether the overall benefits outweigh the overall costs, including inherent uncertainty. Many utility costs are uncertain, but the Commission does not place caps on them. Examples include day-to-day operations costs, labor costs, maintenance costs and fuel costs. The Commission does not cap ancillary service costs incurred to deal with the variable nature of customer load. The issue of placing a cap on wind integration costs raises larger questions of the current risk-reward environment under which NWE operates, rate caps and other forms of regulation which are beyond the scope of this proceeding. Additionally, the Commission is sympathetic to RNP witness Mr. Mainzer's concerns about disincenting desired behavior and otherwise unintentionally interfering with NWE's ability to procure integration services at the lowest possible cost. TR, p. 490.

Portfolio analysis

205. NWE's portfolio analyses demonstrated that the Judith Gap project would add value to a number of different possible portfolio structures. NWE's stochastic modeling showed that adding Judith Gap to the existing portfolio of resources would reduce the expected total cost and risk of the portfolio. NWE-1, Exhibit__(MDT-RFP-21), RDR, PSC-004. NWE Late Filed Exhibit No. MDT-3 showed several other portfolio structures with and without Judith Gap. Each of the portfolio structures performs better from a total cost and risk perspective with Judith Gap. NWE's scenario analyses, using actual wholesale electricity and natural gas prices for the years 2000 through 2004, demonstrated that the Judith Gap resource performs well from a portfolio perspective under a variety of market conditions, but particularly when market prices are high. NWE-1, Exhibit__(MDT-RFP-20), RDR, PSC-003. The Commission finds that procuring Judith

Gap would not predetermine any particular portfolio structure, but would improve the ultimate portfolio's performance with regard to total cost and risks.

206. PPL witness, Mr. King, testified that the statistics in, Exhibits NWE-1_(MDT-RFP-20) and (MDT-RFP-21), and presumably others referenced above, "cannot possibly be the basis for the procurement decisions that NWE is recommending to the Commission." PPL-1, p. 13. According to Mr. King, NWE is not planning to procure a single one of the portfolios described in the two exhibits since they either anticipate no further resource procurements or anticipate procuring resources that NWE is not going to procure. The Commission does not agree. Mr. King's statement mischaracterizes the nature of NWE's portfolio analyses. Nowhere did NWE suggest that it does not plan to procure resources to replace the PPL contracts that expire in 2007. In fact, the slice product Mr. King said NWE does not plan to procure was the subject of negotiations between NWE and PPL. NWE's decision to not procure the replacement resources from its current RFP does not imply that those resources will never be procured. All the modeled portfolios except the "full market exposure" portfolio identify a resource procurement strategy and incorporate some reasonable proxy for the baseload and on peak resources currently purchased from PPL. Those proxies were derived from actual RFP bids. The Commission does not agree with Mr. King that the portfolios NWE analyzed are irrelevant to assessing the cost-effectiveness of the Judith Gap project. In a dynamic wholesale market environment, the default supply utility must maintain flexibility within its planning and procurement process. It will not always be possible to follow through with procurements anticipated in a default supply plan or a request for proposals. Moreover, long-term modeling of a portfolio of resources with staggered contract terms, as envisioned in ARM 38.5.8204, will necessarily require NWE to make assumptions about the cost to replace contracts that expire during the planning horizon.

207. The Commission finds unreasonable Mr. King's assertion that NWE should have evaluated the cost-effectiveness of the Judith Gap project by comparing its average price, including integration costs, property taxes, interconnection and transmission system reinforcements, to a rejected counter-offer for a shaped baseload and peak product. The record clearly demonstrates that NWE is not procuring wind resources as a substitute for baseload resources, but rather to complement strategies for serving intermediate load requirements. TR, pp. 267-268.

208. Mr. King criticized NWE's portfolio modeling approach for being inconsistent with ARM 38.5.8213. PPL-1, p. 21. He stated that NWE's analysis uses techniques, models, assumptions and inputs that are not proven or rigorous and are far from standard industry practice. PPL-1, p. 24. These assertions are not supported by prior Commission decisions or the findings of industry experts hired by the Commission to evaluate NWE's modeling approach and input assumptions. The Commission hired Quantec, LLC in Docket No. N2004.1.15 to conduct an independent and impartial assessment of NWE's methodology in preparing its 2004 Electric Default Supply Resource Procurement Plan. Quantec's final report stated:

Based on our assessment, the Plan is a rigorous effort on the part of NWE to comply with and follow the requirements of the [Commission's] Guidelines. It attempts to balance competing objectives of resource cost and risks; incorporates diversity into the resource portfolio with a mix of supply, demand-side, and renewable resources; and presents the information with sufficient transparency so that it is accessible to both industry professionals and the public.⁹

With respect to the PCI GenTrader® Monte Carlo planning and analysis model, Quantec's report found that about 15 utilities use this tool for planning purposes. Quantec found the stochastic modeling capabilities of GenTrader® appropriate for analyzing the uncertainty related to fuel prices, spot market prices, availability, projected loads, and environmental risks. GenTrader® is a complex tool because it models each hour of each year being studied. Quantec determined this complexity would limit the number of scenarios that GenTrader® could practically model but that it provided most of the tools needed for longer-term portfolio assessment. Quantec stated that the Northwest Power and Conservation Council is a well-accepted source for price information in the region and that NWE appropriately captured the uncertainty and volatility of electricity and natural gas prices using Geometric Brownian Motion (GBM) probability distributions.¹⁰

209. The Commission also commented on NWE's portfolio modeling approach in Docket No. D2004.3.45, NWE's application for advanced approval of a power purchase agreement with Basin Creek LLC. In Order 6557c the Commission stated:

...the Commission has reviewed NWE's default supply plan and issued comments on the plan. Although the Commission recommended that NWE consider

⁹ *Written Comments Identifying Concerns Regarding NorthWestern Energy's Compliance with ARM 38.5.8201-8229*, Montana Public Service Commission. August 17, 2004. See Attachment A.

¹⁰ The main characteristic of the assumed Geometric Brownian Motion probability distribution is that variance in prices tends to increase over time and they capture the skewedness associated with very high price outcomes.

enhancing its long-term analytical methods, the Commission's comments were not an impeachment of NWE's portfolio planning approach or modeling assumptions. The Commission determined that the probabilistic analyses NWE conducted using the GenTrader® modeling software were appropriate because they incorporated explicit assessments of uncertainty, and, therefore, helped to identify and evaluate risks and interrelationships between variables.

In the present application for advanced approval of a power purchase agreement with Judith Gap, NWE has updated the wholesale electricity and natural gas price forecasts to reflect the most current analyses, but continues to use the Northwest Power and Conservation Council's data. NWE-3, p. 60. And NWE has adapted its application of GenTrader® to incorporate long-term, dynamic portfolio modeling, addressing a key Commission comment in Docket No. N2004.1.15. NWE-3, p. 56.

210. Finally, NWE's approach to default supply portfolio planning and resource procurement has been an on-going process guided by Montana statutes, Commission-hosted workshops, administrative rules and orders, as well as feedback in the form of Commission comments on the Company's first comprehensive portfolio plan. At least some in the industry believe Montana has developed a reasonable framework for default supply portfolio planning and resource procurement, as evidenced by the July 2003 joint Calpine-Natural Resources Defense Council-PacifiCorp proposal to state utility regulators on electricity resource portfolio management responsibilities. This Commission's rules also align well with recent reports by the Regulatory Assistance Project and the Edison Electric Institute.¹¹ Although there are undoubtedly areas of both the Commission's rules and NWE's process that could be improved or refined, the record in this proceeding, especially when placed in the context of the body of work that has come before it, demonstrates that NWE's portfolio modeling techniques, assumptions and inputs are reasonable and consistent with the Commission's rules.

¹¹ Resource Planning and Procurement In Evolving Electricity Markets, January 2004, prepared by the Brattle Group for Edison Electric Institute.
Portfolio Management: How to Procure Electricity Resources to Provide Reliable, Low-Cost, and Efficient Services to All Retail Customers, October 2003 prepared by Synapse Energy Economics, Inc for The Regulatory Assistance Project.
Portfolio Management: Protecting Customer in an Electric Market That Isn't Working Very Well, July 2002, The Regulatory Assistance Project.

Transmission congestion and reliability costs

211. Exergy witness, Mr. Pascoe, and PPL witness, Mr. Palmerton, asserted that the total cost of wind generation should include the costs of transmission upgrades. Mr. Pascoe stated that the Judith Gap project will interconnect to NWE's transmission system at a point considered to be on the West of Broadview cutplane. Exergy-1, pp. 30-31. He also asserted that there is approximately 140 MW of available transmission capacity through the West of Broadview cutplane, prior to considering the needs of the Judith Gap project, and that there are currently a number of other new generation projects ahead of Judith Gap in NWE's transmission service queue. If these other generation projects are completed, he believes the Judith Gap project could become responsible for significant transmission upgrades. Since the contract between Judith Gap and NWE states that NWE is responsible for arranging and paying for transmission service, default supply customers would ultimately pay for the cost of the upgrades included in NWE's FERC-regulated transmission revenue requirement and allocated to Network Service customers.

212. Mr. Palmerton asserted that it could cost up to \$10 million to upgrade the transmission system to accommodate the Judith Gap project. He identified as potential upgrades a new 230 kV line from Judith Gap to Great Falls, a new transformer at Judith Gap and upgrading the entire length of the 100 kV the transmission line Judith Gap-Harlowton-Broadview.

213. Russel John Leland presented live rebuttal testimony on behalf of the NWE default supply utility addressing the transmission-related assertions of Mr. Pascoe and Mr. Palmerton. Mr. Leland is the manager of electric transmission planning for the functionally separate NWE transmission unit and incoming chair of the Reliability Subcommittee of the WECC Planning and Coordination Committee. He disputed Mr. Pascoe's assertion that the Judith Gap project will interconnect to NWE's transmission system at a point on the West of Broadview cutplane. According to Mr. Leland, the Judith Gap project will actually be located at a point that is west of the West of Broadview cutplane and Mr. Pascoe's incorrect assumption about the location of the Judith Gap project in relation to the cutplane means his conclusions regarding the need for transmission upgrades are wrong. NWE Late Filed Exhibit No. RJL-1 confirms that the WECC path rating catalog shows the Judith Gap substation is on the West of Broadview path. It also confirms that the metered end of that path is the Broadview substation. Thus Mr. Leland's testimony regarding the location of the Judith Gap project in relation to the point where power

flows on the West of Broadview path are metered is consistent with the information in the WECC path rating catalog.

214. Mr. Leland testified that Mr. Palmerton's conclusions rest on the same incorrect assumption as Mr. Pascoe's. TR, pp. 665-666. Mr. Leland stated that, historically, there has not been a congestion problem through the West of Broadview cutplane. Congestion at the cutplane could become a problem to the extent new generation is added to the east. But as the Judith Gap project is to the west, it will not contribute to congestion at the cutplane.

215. Mr. Leland explained that the Judith Gap interconnection agreement contains "overload mitigation" provisions that are designed to prevent the overloading of a stepdown transformer at Judith Gap (the town) in the event of an outage on the line between Judith Gap (the project) and Broadview. He indicated that such an overload would only occur if the project output exceeds 150 MW, i.e., greater than the capacity in the power purchase agreement between Judith Gap and NWE. The reliability studies NWE conducted indicated that the overload mitigation provisions were all that was needed to reliably connect the Judith Gap project at its full 188 MW planned capacity to the 230 kV system. TR, pp. 668-669. Judith Gap is responsible for paying for the necessary facilities to mitigate any overload situations.

216. In addressing a criticism by Mr. Palmerton about the age of the reliability studies, Mr. Leland essentially suggested that NWE's transmission system impact analyses are conservative because they rely on load assumptions today, rather than load assumptions that reflect future load growth. Mr. Leland testified that load growth improves the performance of the transmission system because Montana is a net exporter of generation. TR, p. 673.

217. Finally, Mr. Leland emphasized several times the important distinction between a network customer designating resources to serve network loads and new resources requesting point-to-point transmission service in order to move power off the transmission system. Since Judith Gap will be a network resource designated by NWE's default supply utility to serve default supply loads, the transmission analysis involved insuring that the new network resource would be interconnected with the same reliability as all other network resources and that energy output from the resource can be moved anywhere *within* the system. Therefore, the generation interconnection study covered all relevant transmission related issues; it was studied thoroughly and, as Mr. Leland indicated, additional studies are not required to obtain transmission service.

The transmission service request is a formality needed to designate a new point of receipt for a network resource. TR, p. 680.

218. The Commission finds that Mr. Leland's testimony reasonably demonstrated that there are neither reliability issues nor transmission congestion issues related to NWE's procurement of between 135 MW and 150 MW of wind capacity from Judith Gap. His testimony further demonstrated that reliability issues related to interconnecting the full 188 MW of potential capacity have been addressed in the interconnection agreement between Judith Gap and the NWE transmission unit, although the power purchase agreement between NWE and Judith Gap only envisions up to 150 MW. Thus, NWE default supply customers are not responsible for any interconnection related costs, except to the extent the Commission approves additional purchases from the project above 150 MW and the price of those purchases reflects overload mitigation-related costs. Furthermore, due to its location, Judith Gap will not cause congestion at the West of Broadview cutplane and, therefore, will not cause transmission upgrade costs that will affect NWE customers. Mr. Palmerton's testimony that NWE's transmission unit failed to adequately study the reliability impacts of interconnecting Judith Gap, violated reliability standards established by WECC, NERC and FERC, or otherwise neglected its responsibilities as a transmission services provider in ways that may harm the quality of service available to Montana customers or damage generating facilities connected to the transmission system is particularly suspect. First, PPL has a direct financial self-interest in preserving opportunities to supply NWE's default supply utility. Second, the record is completely void of any evidence that PPL has either sought, or plans to seek, remedies for such failures from any of the organizations that are in a position to actually enforce reliability standards, standards for studying the potential effects of interconnecting new large generators and non-discriminatory, unbundled wholesale transmission service. Finally, the Commission finds that it is NWE's transmission division, the control area operator, which is directly responsible for satisfying all transmission reliability study and action requirements, not PPL or Exergy. The Commission finds no evidence that the transmission division failed in that responsibility or has any reason to jeopardize its control area within the WECC transmission system through non-compliance with its reliability study obligations.

Quantity and term of the Judith Gap power purchase agreement

219. No party directly contested the overall quantity or term contained in the power purchase agreement with Judith Gap. Exergy and PPL indirectly contested the quantity by questioning the integration costs and/or whether it would be better to divide the quantity into smaller pieces that would be interconnected to the transmission system in different locations. Integration cost issues were addressed in the previous section.

220. The Commission finds the quantity and duration reasonable. Notably, the 135 MW to 150 MW quantity is consistent with NWE's 2004 electric default supply resource procurement plan previously reviewed by the Commission. NWE specified procurement of wind generation in an action plan accompanying the 2004 plan and the preferred procurement strategies in the plan all contained 150 MW of installed wind capacity. The duration is likely a function of financing provisions for a new, capital intensive utility scale generation resource. In the context of NWE's existing default supply portfolio, the duration of the Judith Gap power purchase agreement will contribute to long-term price stability.

Other non-price considerations

221. Several other non-price considerations serve to further illustrate that NWE's selection of the Judith Gap project was reasonable and justified. The record indicates that the Judith Gap project team includes highly experienced and recognized independent power developers with strong financial backing. Judith Gap would be subject to financial penalties of up to \$8 million if it fails to achieve capacity installation deadlines. The Judith Gap project demonstrated an advanced state of planning and development with respect to environmental issues, turbine acquisition, transmission interconnection issues and community relations.

222. As described in the above findings, the power purchase agreement between NWE and Judith Gap resulted from a reasonable effort by NWE to comply with the objectives in Section 69-8-419, MCA and the Commission's rules in ARM 38.5.8201-28. Also, as described, the price, quantity, duration and other discussed contract terms directly related to the price, quantity and duration of the power supply in the in the agreement are reasonable. Advanced approval by the Commission is a condition precedent to the respective obligations of Judith Gap and NWE contained in the power purchase agreement. Without the Commission's approval the project will not be built and the benefits described in this order will not accrue to NWE's customers.

Therefore, advanced approval of the specific parts of the agreement described in this order is in the public interest.

Renewable Energy Credits (green tags)

223. Mr. Thompson stated at the hearing that NWE has considered the possibility of selling between 20 percent and 25 percent of the renewable energy credits associated with the energy production from the Judith Gap project. NWE would keep the rest of the renewable attributes in the default supply portfolio to satisfy any future portfolio standard that it may be subject to. TR, p. 285 lines 13-18. Mr. Thompson indicated that renewable energy credits currently trade at a price of between \$2.00 and \$5.00 per megawatt hour. The Commission expects NWE to consider the potential sale of renewable energy credits in the context of its long-term portfolio planning process and discuss options with its Technical Advisory Committee. The environmental attribute of the Judith Gap energy production covered by the power purchase agreement addressed in this proceeding are dedicated to the default supply portfolio. Disposition of those attributes must be consistent with the goals and objectives of §69-8-419, MCA and the Commission's default supply planning guidelines. Prior to selling any renewable energy credits associated with energy purchased from Judith Gap, NWE must justify its strategy in a subsequent default supply plan or an update to the plan submitted in 2004.

FINDINGS OF FACT

1. Advanced approval of the power purchase agreement between NWE and Judith Gap is in the public interest.
2. The Judith Gap power purchase agreement resulted from a reasonable effort by NWE to comply with the objectives of § 69-8-419, MCA, and related administrative rules ARM 38.5.8201-28.
3. The price, quantity, duration and related terms of the agreement are reasonable.
4. For purposes of the Commission's consideration of the Judith Gap wind contract, the Commission finds the RFP process that resulted in the selection of Judith Gap was conducted fairly, openly and competitively as required by § 69-8-419(2)(d), MCA.
5. The RFP process that resulted in the selection of the Judith Gap wind proposal was conducted in accordance with industry-accepted procurement practices in compliance with ARM 38.5.8212(1).

6. NWE and its agent, Lands Energy, complied with ARM 38.5.8212(2)(c) by developing, using and documenting a systematic rating mechanism to objectively rank the bids received in the RFP process that resulted in the selection of the Judith Gap wind proposal.

7. Exergy's claim that Lands Energy unfairly rejected its wind bid as nonconforming is not credible.

8. There is no evidence in the record to support Exergy's suggestion that the Judith Gap wind contract may have been reassigned to an additional third party after the bid was submitted and during the bid evaluation process in violation of ARM 38.5.8212(2)(f).

9. The energy prices in the Judith Gap wind contract, which average \$31.71/Mwh, are reasonable.

10. NWE is properly analyzing multiple strategies for addressing net variability caused by integrating wind resources into the default supply portfolio.

11. NWE reasonably concluded that the combination of the attractive energy price and complementary (to load) shape of the energy production for the Judith Gap project outweighed the potential benefits of site diversification in this instance.

12. The cap on wind integration costs recommended by MCC is not warranted, given that undefined integration costs pose little risk to ratepayers, there exist uncertainties about how such a cap would be implemented, and that, over the long term, PSC prudence reviews of NWE's actual integration approaches is the better approach for encouraging innovation, incorporating best practices, and minimizing costs.

13. NWE's portfolio analyses demonstrated that the Judith Gap project would add value to a number of different possible portfolio structures.

14. PPL's claims that NWE's portfolio modeling approach does not comply with ARM 38.5.8213 and that NWE's analyses use unproven and non-standard techniques, models, assumptions and inputs conflict with prior findings of the Commission and those of industry experts hired by the Commission to evaluate NWE's modeling approach and input assumptions.

15. Although there are undoubtedly areas of PSC rules and NWE's planning and procurement process that could be refined, the record in this proceeding demonstrates that NWE's portfolio modeling techniques, assumptions and inputs are reasonable and consistent with PSC rules.

16. NWE demonstrated that there are neither reliability issues nor transmission congestion issues related to NWE's procurement of between 135 MW and 150 MW of wind capacity from Judith Gap.

17. Reliability issues related to interconnecting the full 188 MW of potential capacity from Judith Gap have been addressed in the interconnection agreement between Judith Gap and the NWE transmission unit, although the wind contract only envisions up to 150 MW.

18. Due to the location of the Judith Gap project, it will not cause congestion at the West of Broadview cutplane and, therefore, will not cause transmission upgrade costs that will affect NWE customers.

19. Environmental attributes associated with energy delivered under the Judith Gap power purchase agreement are default supply resources the optimal disposition of which is governed by NWE's proper application of ARM 38.5.8201-29.

20. All introductory or discussion statements that can properly be considered findings of fact and that should be considered as such to preserve the integrity of this Order are incorporated herein as findings of fact.

CONCLUSIONS OF LAW

1. The Montana Public Service Commission (Commission) regulates the rates and services of public utilities. Title 69, Chapter 3, MCA.

2. NorthWestern Energy (NWE) is a public utility subject to the jurisdiction of the Commission.

3. NWE is a distribution services provider and a default supplier of electricity supply. §§ 69-8-103(8)(9)(11) and 69-8-210(1), MCA.

4. NWE is obligated to procure a portfolio of electricity supply to meet the requirements of all default supply customers. § 69-8-208(3), MCA.

5. The Commission is required to process this Application according to § 69-8-421, MCA.

6. Pursuant to § 69-8-421(3)(c), MCA, the advanced approval of the agreement presented in this Application, according to the terms of this Order, is in the public interest; the agreement is a result of a reasonable effort by NWE to comply with § 69-8-419, MCA, and the administrative

rules referenced in that section; and the price, quantity, duration and related terms of the agreement are reasonable.

7. All findings of fact that can properly be considered conclusions of law and that should be considered as such to preserve the integrity of this Order are incorporated herein as conclusions of law.

ORDER

1. The monthly on-peak and off-peak energy prices specified in Exhibit A of the power purchase agreement are reasonable.

2. The good faith estimates of charges for integration costs specified in the Application and supporting testimony and exhibits are reasonable. NWE must prudently procure necessary wind integration services and apply its best efforts to ensure that the strategy for obtaining wind integration services minimizes long-term total portfolio costs.

3. The initial 20 year term of the power purchase agreement is reasonable. NWE must assess the potential advantages and disadvantages of exercising the options to extend the term of the power purchase agreement pursuant to Section 2.03 of the agreement and submit its findings to the Commission for review and comment prior to exercising the options. This assessment may be included in a default supply plan or plan update.

4. Wind integration services procurement costs are not approved in advance. Wind integration procurement will be evaluated for prudence in the context of default supply cost recovery applications filed by NWE.

5. NWE must file a final signed and executed power purchase agreement.

6. Green credits associated with the Judith Gap project are the property of the default supply. NorthWestern must receive advanced approval from the PSC for the sale, trade or transfer of green credits from the Judith Gap project. Any proceeds from the conveyance of these green credits will be reflected for the benefit of the default supply.

DONE AND DATED this 30th day of March 2005, by a vote of 4 to 1.

BY ORDER OF THE MONTANA PUBLIC SERVICE COMMISSION

GREG JERGSON, Chairman

BRAD MOLNAR, Vice-Chairman
Voting to Dissent (To Be Filed)

DOUG MOOD, Commissioner

ROBERT H. RANEY, Commissioner

THOMAS J. SCHNEIDER, Commissioner

ATTEST:

Connie Jones
Commission Secretary

(SEAL)

NOTE: Any interested party may request the Commission to reconsider this decision. A motion to reconsider must be filed within ten (10) days. See ARM 38.2.4806.